AJS

American
Journal
of Sociology
Volume 75 Number 1
July 1969

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Book Reviews

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IN THIS ISSUE

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How to Ransack Social Mobility Tables and Other Kinds of Cross-Classification Tables[1]

Leo A. Goodman
University of Chicago

This article presents (1) methods for examining every part of a social mobility table in search of the various possible relationships between an individual's status category and his father's status category that are congruent with the data in the table; (2) methods for comparing two (or more) social mobility tables by examining the corresponding parts of each of the tables in search of the differences between the corresponding relationships in the tables; and (3) conceptual tools that can be used by the research worker to assist and stimulate him to conceive of a wide variety of possible relationships between an individual's status category and his father's status category, which could then be checked with the data. These tools and methods can also be applied to other kinds of cross-classification tables to assist in the conception and analysis of the various possible relationships between the column classification and the row classification of each table, and in studying the differences between the corresponding relationships in two (or more) such tables. The techniques presented here for studying the possible relationships between two qualitative variables (the column classification and the row classification) were obtained, in part, by adapting, for qualitative variables, some of the multiple-comparison ideas developed earlier in the analysis of variance context. To illustrate the application of the conceptual tools and methods proposed here, we reanalyze data on intergeneration social mobility in Britain and in Denmark. We find, for example, with the introduction of a new concept of "intrinsic status inheritance and status disinheritance," that there is a statistically significant amount of intrinsic status disinheritance in the middle status category in Britain and in Denmark, as well as statistically significant amounts of intrinsic status inheritance in the upper and lower status categories. (This result concerning status disinheritance is an apparent contradiction of all earlier findings based on the more usual methods of analysis.) Furthermore, there is more intrinsic status inheritance in the upper status category than in the lower, and the difference is statistically significant in both countries. Also, in contrast to all earlier findings, we find that the relationship between a subject's status and his father's status in the British study differs from the corresponding relationship in the Danish study in statistically significant ways which we describe in some detail.

[1] This article is based on a talk presented at the Annual Meeting of the American Sociological Association in Boston, Massachusetts, August 29, 1968. This research was supported in part by Research Contract NSF GS 1905 from the Division of the Social Sciences of the National Science Foundation. For helpful comments, the author is indebted to O. D. Duncan, R. W. Hodge, W. H. Kruskal, J. Levine, D. McFarland, T. Pullum, and A. Stinchcombe.

In analyzing a given body of data, many of us have been taught that we should formulate the hypotheses which we might wish to test before we examine the data upon which the test is to be based, and that hypotheses which are suggested to us by a scanning of the data cannot then be tested using the same data. We have been warned (or we should have been warned) that the methods usually used for testing hypotheses can lead us astray if the particular hypotheses selected for testing are determined by first scanning the body of data to be tested. In the present article, we shall provide relatively simple methods for analyzing a given body of data, which are *different from the usual methods*, and which can be used by the research worker to test hypotheses which might be suggested to him by scanning the data, as well as hypotheses which he might have formulated beforehand. The methods presented here can be used when the body of data to be scanned, and later analyzed, consists of a cross-classification table or a set of cross-classification tables (e.g., a social mobility table for a given country or a set of social mobility tables for various countries).

A research worker cannot be expected to formulate beforehand (i.e., before scanning the data) all the hypotheses which he might later conceive of and which he might then wish to test. Indeed, the research worker's ability to conceive of hypotheses in the course of scanning a body of data is an important asset which he would do well to develop. In the present article, we shall also provide a general conceptual tool which can be used by the research worker to assist and stimulate him to *conceive* of hypotheses which he might then wish to test. In the analysis of a given cross-classification table, this tool can be used to assist in the formulation of a variety of hypotheses pertaining to the various relationships between the column classification of the table and the row classification (e.g., between an individual's status category and his father's status category as represented by the columns and rows, respectively, in an intergeneration social mobility table). In the analysis of a set of two (or more) cross-classification tables, this tool can be used to assist in the formulation of a variety of hypotheses pertaining to the difference between the tables with respect to the corresponding relationships between the column classification and the row classification of each table; for example, the difference between two (or more) countries with respect to the corresponding relationships between an individual's status category and his father's status category in each country.

As we have noted, the methods referred to above can be applied, for instance, to intergeneration social mobility tables in which the columns denote the possible status categories of the individuals (the respondents) and the rows denote the corresponding status categories for their fathers. These methods can also be applied to quite different kinds of cross-classification tables. In order to apply these methods, the number of columns in the table need not be equal to the number of rows in the table, and the column and row classifications can pertain to quite different variables (e.g., education and race). In social mobility tables, the column and row classifications pertain to the same kind of variable (e.g., status—subject's status and

father's status), and the tables are usually square (i e., there are an equal number of columns and rows).

In this paper, we shall not discuss all the possible relationships between the column and row classifications of the table that may be of interest, but only some of the ones that appear to be relevant to the particular kind of cross-classification tables under study. For other kinds of cross-classification tables, the general conceptual tool presented here can lead to the formulation of quite different possible relationships between the column and row classifications of the table, which could then be checked with the data using the statistical methods here proposed.

The techniques proposed here were obtained, in part, by adapting, for qualitative variables, some of the multiple-comparison ideas proposed earlier in the analysis of variance context. This adaptation for the analysis of qualitative variables was carried out in an earlier series of articles by the present author (Goodman 1964*b*–*e*, 1965*a*) in which simultaneous confidence intervals and multiple-test procedures were developed for the simultaneous analysis of a variety of questions pertaining to a given qualitative variable or to a given set of qualitative variables.[2] In the present paper, we shall use some of the techniques introduced in this earlier series of articles together with a quite different set of techniques that were developed for the analysis of cross-classified data in which the entries in certain cells of the cross-classification table are omitted from the analysis because they are either missing, unreliable, void, or restricted in certain ways (see e.g., Goodman 1961*b*, 1963, 1964*a*, 1965*b*, 1968, and the literature cited there). We shall see how these two quite different kinds of contributions to our battery of methods for the analysis of qualitative variables can be brought together to shed further light on a single body of data.

The multiple-test procedures proposed herein for the analysis of qualitative variables can be used to overcome some of the methodological problems described by Stinchcombe (1964, p. 196) pertaining to the use of the same material in both the exploratory analysis and in the final survey, and they can also be used to perform some of the data-dredging functions described by Selvin and Stuart (1966) for survey analysis. These techniques provide a flexible yet systematic way to study a given qualitative variable or a given set of qualitative variables. It should, however, be noted that there are certain limits to the flexibility of these techniques. For example, in this article, our analysis of a given cross-classification table will be limited to the study of the various possible "multiplicative interactions" between the column and row classifications (i.e., between the status categories for the individuals and the status categories for their fathers). We shall consider a wide variety of multiplicative interactions between the column and row classifications, and we could, in principle, consider all such multiplicative interactions. But we will not consider here other kinds of interactions (between the column and row classifications) that need not be of the multi-

[2] For a discussion of multiple-comparison techniques in various contexts and for some historical perspective on the development of this field, see Miller 1966, and the literature cited there.

plicative kind.[3] The techniques described herein can be used to freely ransack cross-classification tables in order to search for the multiplicative interactions that are congruent with the data.[4]

It should also be noted that the methods presented here can be applied (1) when the cross-classified data describe either a simple random sample of individuals from a given population, or (2) when the data describe a stratified random sample in which the column categories (or the row categories) of the table form the strata that are sampled. These methods are approximate in the same sense that the usual χ^2 test for independence is approximate (i.e., justification for its use is based upon large-sample theory); and they involve the same order of approximation as does the usual χ^2 test. Application of the methods proposed herein can provide a much more thorough analysis of the data than is obtained with the usual χ^2 test.

THE INTERACTION IN EACH 2 × 2 SUBTABLE

For expository purposes, we shall use table 1 to illustrate the methods that we propose in this section. This table is based upon data obtained by Glass and his co-workers (1954).[5] It provides a cross-classification of a sample of 3,497 males in Britain according to each subject's occupational status category and his father's occupational status category.

We shall sometimes refer to the row and column categories in table 1 as the status categories pertaining to a subject's "origin" and "destination," respectively (see Duncan 1966). Looking at table 1, a research worker might select, as worthy of special attention, the particular 2 × 2 subtable obtained when, for example, we consider only *U* or *M* origins and *U* or *M* destinations (i.e., when we exclude from consideration all subjects whose origin category is *L*, and also all subjects whose destination category is *L*). This subtable is table 2.

From table 2, we see that the observed odds are 395 to 588 (i.e., 0.67 to 1.00) that an individual whose origin is *U* will have destination *M* rather than destination *U*; and that the observed odds are 714 to 349 (i.e., 2.05 to 1.00) that an individual whose origin is *M* will have destination *M* rather than destination *U*. The observed "risk" of having destination *M* (rather than destination *U*) is 0.67 for those whose origin is *U*, and it is 2.05 for

[3] Multiplicative kinds of interactions arise naturally with models that describe the expected entries in the cross-classification table as being affected in a multiplicative way by "row effects" (related to the row marginals), "column effects" (related to the column marginals), and "row × column interaction effects"; whereas other kinds of interactions between the column and row classifications arise with other kinds of models. For multiplicative interactions, see Goodman (1964*b*–*d*); for others kinds of interactions and related matters, see Goodman (1961*a*, 1964*e*, 1965*a*, *c*).

[4] These techniques could also be used to search simultaneously for the row effects and the column effects, as well as the interaction effects in the multiplicative model. For further details, see my article (1964*d*).

[5] The upper-, middle-, and lower-status categories in table 1 correspond to the occupational status categories 1–4, 5, 6–7, respectively, as defined by Glass. Table 1 was studied earlier by White (1963) and Goodman (1965*b*).

those whose origin is M.[6] The ratio of the risks is 2.05/0.67 = 3.05.[7] Thus, comparing those whose origin is M with those whose origin is U, the observed "relative risk" of having destination M (rather than destination U) is 3.05 to 1.00. In other words, the observed risk is 3.05 times as great for those whose origin is M than for those whose origin is U. Since the relative

TABLE 1

CROSS-CLASSIFICATION OF A SAMPLE OF BRITISH MALES ACCORDING TO EACH SUBJECT'S STATUS CATEGORY AND HIS FATHER'S STATUS CATEGORY

FATHER'S STATUS	SUBJECT'S STATUS		
	U	M	L
U	588	395	159
M	349	714	447
L	114	320	411

NOTE.—This table referred to as British Sample in following tables.

TABLE 2

CROSS-CLASSIFICATION OF SAMPLE OF BRITISH MALES: SUBJECT'S STATUS CATEGORY, U OR M; FATHER'S STATUS CATEGORY, U OR M

FATHER'S STATUS	SUBJECT'S STATUS	
	U	M
U	588	395
M	349	714

risk calculated above is actually the ratio of the observed odds (i.e., 2.05/0.67), we refer to it as the "odds-ratio."

For those readers whose understanding is facilitated by an exposition using mathematical notation, we include the following remarks: If we let f_{ij} denote the observed frequency in the ith row ($i = 1,2$) and jth column ($j = 1,2$) of table 2, then the observed risk is f_{12}/f_{11} for those whose origin is U, and the observed risk is f_{22}/f_{21} for those whose origin is M. The observed

[6] The term "risk" as used here is synonymous with the odds of having destination M rather than U (see, for example, Gart 1962). This term has been used sometimes in the statistics literature to denote other things with which the usage here should not be confused.

[7] All numerical results presented in this article were carried out to more significant digits than are reported here. The results were then rounded off to fewer digits for the sake of of simplicity of exposition.

relative risk (i.e., the odds-ratio) is $(f_{22}/f_{21})/(f_{12}/f_{11})$, which is equal to $(f_{11}f_{22})/(f_{12}f_{21})$. The odds-ratio compares the relative magnitudes of the odds (f_{22}/f_{21}) with the odds (f_{12}/f_{11}), the odds (f_{11}/f_{12}) with the odds (f_{21}/f_{22}), the odds (f_{11}/f_{21}) with the odds (f_{12}/f_{22}), the odds (f_{22}/f_{12}) with the odds (f_{21}/f_{11}). Note that the odds-ratio is not influenced by either the absolute or relative sizes of the row marginal totals or by either the absolute or relative sizes of the column marginal totals.[8] Note also that the odds-ratio would remain unchanged if the 2×2 table was changed by relabeling the rows as columns and vice versa.[9]

If the column classification had been independent of the row classification for the 2×2 population table corresponding to table 2, then the odds-ratio (i.e., the relative risk) would have been 1 for this population, and the logarithm of the odds-ratio would have been zero. The logarithm of the observed odds-ratio (3.05) is actually 1.11.[10] We shall call the logarithm of the observed odds-ratio the "interaction" between the column and row classifications of the 2×2 table, and we shall use the symbol G to denote this interaction (see Goodman 1964*b*). In order to test the null hypothesis that the column classification is independent of the row classification in the 2×2 population table corresponding to table 2 (i.e., the null hypothesis that the interaction between the column and row classifications is zero for the 2×2 population table), we can compare the observed interaction G with zero, using the standard error of G as a gauge.

Again for those readers whose understanding is facilitated by the use of mathematical notation, we include the following: If we let g_{ij} denote the logarithm of f_{ij}, then the logarithm G of the observed odds-ratio is

$$\begin{aligned} G &= \log [(f_{11} f_{22})/(f_{12} f_{21})] \\ &= g_{11} + g_{22} - g_{12} - g_{21} \,. \end{aligned} \tag{1}$$

Since the odds-ratio tells us what is the relative magnitude of one odds (say, f_{22}/f_{21}) compared with another odds (say, f_{12}/f_{11}) in a 2×2 table, when we compare the odds-ratios calculated for different 2×2 tables it would seem natural to examine the relative magnitudes of these odds-

[8] In other words, suppose that in the 2×2 table we make a transformation on the cell entries f_{ij} $(i = 1,2; j = 1,2)$ of the form

$$f_{ij} \rightarrow a_i b_j f_{ij} \,,$$

where a_i and b_j are any positive numbers $(i = 1,2; j = 1,2)$. Then the odds-ratio calculated for the transformed table will be equal to the odds-ratio for the original table.

[9] For the 2×2 table, if a *measure of association* between the column and row classifications is a function of the proportion of the observations in *the first row* of the table that fall also in the first column and of the proportion of observations in the second row that fall also in the first column, *and* if this measure is invariant when the rows are relabeled as columns and vice versa, then the measure *must* be a function of the odds-ratio (see Edwards 1963, Goodman 1965*c*).

[10] Natural logarithms will be used throughout this article. For some tables of natural logarithms, see, for example, Fisher and Yates (1953) and Pearson and Hartley (1954).

ratios. An examination of the relative magnitudes of odds-ratios is facilitated by the calculation of the logarithms of the odds-ratios (i.e , by the calculation of the interactions) since differences between interactions reflect the relative magnitudes of the corresponding odds-ratios (i e., the difference between two interactions is equal to the logarithm of the relative magnitude of the corresponding odds-ratios). If the difference between two interactions remains unchanged, the corresponding relative magnitudes of the odds-ratios will remain unchanged.[11] Since we are interested in the relative magnitudes of odds ratios, we use the logarithmic scale of measurement; that is, we use the corresponding interactions.[12] We also note that the standard error S of the interaction G is of a particularly simple form, namely,[13]

$$S = (h_{11} + h_{22} + h_{12} + h_{21})^{1/2} , \tag{2}$$

where $h_{ij} = 1/f_{ij}$ for $i = 1, 2; j = 1, 2$.

Applying formula (2) to table 2, we see that the standard error S of the observed interaction G is[14]

$$S = \left[\tfrac{1}{588} + \tfrac{1}{395} + \tfrac{1}{349} + \tfrac{1}{714}\right]^{1/2} = 0.09 . \tag{3}$$

Thus, if we divide the observed interaction G by its standard error S, we obtain a value of

$$Z = G/S = 12.08 , \tag{4}$$

which is statistically significant when compared with the usual percentiles of the standardized normal distribution. (For a two-sided test at the 5 percent level of significance, the absolute value of Z would be compared with the constant 1.96, which is the 97.5th percentile of the standard

[11] The reader familiar with differential calculus will also recall that

$$d \log x = (dx)/x ;$$

i.e., if a small change occurs in x, then the relative change in x is equal to the change in the logarithm of x.

[12] As we noted earlier, the interactions defined in this paper also arise naturally with models that consider the expected frequencies in the cross-classification table as being affected in a multiplicative way by "row effects" (related to the row marginals), "column effects" (related to the column marginals), and "row × column interaction effects" (see Birch 1963, Goodman 1964*d*).

[13] The statistic (2) is an estimate of the standard deviation of G. Of course, other estimates of this standard deviation could also be considered, but we shall not do so here. Some comments on different estimates of the standard deviation appear in my article (1964*d*).

[14] As we noted in the preceding section, the methods presented here (formula [2] in particular) can be applied to data obtained by simple random sampling or by stratified random sampling of the kind described there. We use it here as an approximate gauge even though the data in table 1 were actually obtained by a kind of stratified sampling different from that described in the preceding section. For further discussion of this point, see my article (1965*b*).

normal distribution.) We shall call Z the standardized value of the interaction G.[15]

Using the constant 1.96, we also obtain the following 95 percent confidence interval for the interaction in the population 2×2 table corresponding to table 2:

$$G^{+} = G + 1.96S = 1.29$$
$$G^{-} = G - 1.96S = 0.93\,. \tag{5}$$

The confidence interval for this interaction is from 0.93 to 1.29. Corresponding to this confidence interval, we obtain (with the aid of the table of natural logarithms) the following confidence interval for the odds-ratio in the population 2×2 table corresponding to table 2:[16]

$$R^{+} = 3.65$$
$$R^{-} = 2.54\,. \tag{6}$$

Recall that the observed value of the odds-ratio was $R = 3.05$.[17] Note that the confidence interval for the interaction (in the population 2×2 table) did not include zero, and the corresponding confidence interval for the odds-ratio (in the population 2×2 table) did not include 1.0.[18]

If we had decided to use table 2 (in order to test the null hypothesis that the column classification was independent of the row classification) before we had actually looked at the data in table 2 (or in the larger table 1), then the procedures described above would be legitimate. On the other hand, if we had actually selected the 2×2 subtable (table 2) from the larger 3×3 table (table 1) by noting which subtables of the 3×3 table would appear, at first sight, to provide strong evidence for the rejection of this null hypothesis, then the procedures described above would be illegitimate. In judging the statistical significance of the Z value (12.08) obtained for the 2×2 subtable, it would be necessary to take into account the fact that

[15] The term "standardized value" of a statistic is used here to mean the ratio of the statistic and its standard error (as in formula [4]). The same or similar words have also been used elsewhere to denote other things with which the usage here should not be confused.

[16] We would use here the natural-logarithm table in, so to speak, inverted order (or equivalently a table of the exponential function) when we calculate R^{+} and R^{-} from L^{+} and L^{-}, respectively. For example, from the natural-logarithm table we find that 3.65 is the number which is such that its natural logarithm is 1.29. Some comments on other methods for calculating confidence intervals for the odds-ratios in the population 2×2 table appear in my article (1964*b*).

[17] We use the symbol R at this point in our article to denote the observed value of the odds-ratio, and we let R^{+} and R^{-} denote the upper and lower confidence limits, respectively. This particular notation at this point in the article should not be confused with our use of the symbol R elsewhere in the article to denote the number of rows in the $R \times C$ cross-classification table.

[18] The confidence interval for this interaction will include zero (and the corresponding confidence interval for the odds-ratio will include 1) if and only if the absolute value of Z calculated by (4) is smaller than 1.96.

the subtable which was actually used was selected by an examination of the larger 3 × 3 table (table 1), and that other Z values (corresponding to the interactions in the other subtables of the 3 × 3 table) might have been considered too. If a test at the 5 percent level of significance is desired, it would not be correct to compare the Z value with the usual constant (viz., 1.96). We shall now indicate what is the correct constant with which to compare the Z value.

This problem was considered in my article (1964*b*) where I showed that either one of two constants would be appropriate. The first constant (which we shall present in the following paragraph) is appropriate when we cannot determine beforehand how many interactions may be of possible interest. The second constant (which we shall present in the second paragraph below) is appropriate when we can determine beforehand the interactions that may be of interest.[19]

To explain how the first appropriate constant is obtained, we first note that (*a*) a 2 × 2 table has 1 degree of freedom for testing the null hypothesis of independence using the usual χ^2 distribution, and (*b*) the constant 1.96 (considered earlier herein) is the square root of the 95th percentile of the χ^2 distribution with 1 degree of freedom. The constant 1.96 is appropriate if the 2 × 2 table (with its 1 degree of freedom), which is to be tested for independence, was selected before the data were scanned, and if only this one 2 × 2 table is to be tested. If the 2 × 2 table is a subtable from a larger table (say a 3 × 3 table), and if it was selected by scanning the larger table, then the size of the larger table is relevant in determining the appropriate constant If the larger table (from which the 2 × 2 subtable was selected) was a 3 × 3 table, then we note that (*a*) a 3 × 3 table has 2 × 2 = 4 degrees of freedom for testing the null hypothesis of independence using the usual χ^2 distribution, and (*b*) the constant 1.96 should be replaced by the square root of the 95th percentile of the χ^2 distribution with 4 degrees of freedom (rather than 1 degree of freedom).[20] This con-

[19] The second constant will depend upon the number of interactions that may be of possible interest, and it will increase as this number increases. In any particular case, if the second constant is larger than the first constant, then it can be replaced by the first constant since the first constant is appropriate even if an infinite number of interactions were of possible interest.

[20] The χ^2 distribution with four degrees of freedom is used here because the usual χ^2 statistic for testing the null hypothesis of independence in the 3 × 3 table has this as its large-sample distribution under the null hypothesis, and a modified form of this statistic (which has the same large-sample distribution under the null hypothesis) is related to the maximum value obtained when all possible interactions are calculated from the 3 × 3 table. For further details, see my article (1964*b*).

For the sake of convenience, the level of significance for each set of multiple tests presented herein will be the 5 percent level (or less), with the corresponding 95 percent level of confidence for the related simultaneous confidence intervals. For any given set of interactions to be analyzed, if all the interactions in the set are equal to zero for the population cross-classification table (i.e., if the corresponding null hypothesis is true for the population), then the probability is at least .95 that the standardized value of *all* the interactions in the set (calculated from the sample data) will be smaller in ab[illegible]

stant is 3.08. More generally, if the larger table (from which the 2×2 subtable was selected) was a $R \times C$ table, then we note that (*a*) a $R \times C$ table has $(R-1)(C-1)$ degrees of freedom for testing the null hypothesis of independence using the usual χ^2 distribution, and (*b*) the constant 1.96 should be replaced by the square root of the 95th percentile of the χ^2 distribution with $(R-1)(C-1)$ degrees of freedom.

To explain how the second appropriate constant is obtained, we first note that (*a*) a 2×2 table has at most one interaction of possible interest, and (*b*) the constant 1.96 (considered earlier herein) is the absolute value of the 2.5th percentile of the standardized normal distribution. The constant 1 96 is appropriate if the 2×2 table (with its one interaction of possible interest), which is to be tested for independence, is the only 2×2 table to be tested, and if it was selected before the data were scanned. If the 2×2 table is a subtable from a larger table, and if some of the other interactions in the larger table (corresponding to other subtables in the larger table) may be of interest, then the appropriate constant to be used should depend upon how many interactions in the larger table are of interest. If there are at most, say, twenty different interactions of interest in the larger table, then the constant 1.96 should be replaced by the absolute value of the (2.5/20)th percentile (i.e., the 0.125th percentile) of the standardized normal distribution (rather than the 2.5th percentile). This constant is 3.02. More generally, if there are at most K different interactions of interest in the larger table, then the constant 1.96 should be replaced by the absolute value of the $(2.5/K)$th percentile of the standardized normal distribution.

To facilitate the use of these constants, we give their numerical values in table 3, using the 5 percent level of significance.[21] This table gives both the first appropriate constant when the relevant number of degrees is 1, 2, 3, . . . , 35; and the second appropriate constant when the maximum number of interactions of interest is 1, 2, 3, . . . , 35. Note that the second appropriate constant, when the maximum number of interactions of interest is say twenty, is smaller than the first appropriate constant when the number of degrees of freedom is 4. Note also that the first appropriate constant to be used for ransacking a cross-classification table is smaller in one case than another if the number of degrees of freedom is smaller, and that the second appropriate constant is smaller in one case than another if the maximum number of interactions of possible interest is smaller. The research worker who has a specific set of, say, twenty interactions that are of interest, can use a smaller constant than can the research worker who has not specified, in advance of scanning the data, the set of interactions that may be of interest. In situations where both the first and second appropriate constants can be calculated, we use the smaller of the two constants when a bound on the level of significance is specified and when we would want to reduce the probability of errors of the second kind (of accepting the null hypothesis when it is false).

Let us now suppose that the cross-classification table under consideration

[21] …nd paragraph of footnote 20.

is a 3 × 3 table (say table 1). Since a 3 × 3 table has 2 × 2 = 4 degrees of freedom for testing the null hypothesis of independence, all interactions of possible interest in this table can be calculated directly from a basic set of four different interactions. Each of the four interactions can correspond to the interaction in a 2 × 2 subtable. One possible basic set of 2 × 2 subtables of table 1 is given in table 4. From these four subtables (tables 1A, 1B, 1C, 1D described in table 4), we can calculate the interactions corresponding to the nine possible 2 × 2 subtables formed from table 1 as indicated in table 5. Each of the nine different subtables of table 1 is de-

TABLE 3

CRITICAL CONSTANTS FOR SET OF MULTIPLE TESTS AT THE 5% LEVEL OF SIGNIFICANCE

Degrees of Freedom or Number of Tests of Possible Interest	Critical Constants (a)*	Critical Constants (b)†	Degrees of Freedom or Number of Tests of Possible Interest	Critical Constants (a)*	Critical Constants (b)†
1	1.960	1.960	19	5.490	3.008
2	2.448	2.241	20	5.605	3.023
3	2.795	2.394	21	5.716	3.038
4	3.080	2.498	22	5.824	3.052
5	3.327	2.576	23	5.931	3.065
6	3.548	2.638	24	6.034	3.078
7	3.751	2.690	25	6.136	3.091
8	3.938	2.734	26	6.236	3.102
9	4.113	2.773	27	6.334	3.113
10	4.279	2.807	28	6.429	3.124
11	4.436	2.838	29	6.523	3.134
12	4.585	2.865	30	6.616	3.144
13	4.729	2.891	31	6.707	3.154
14	4.867	2.914	32	6.797	3.163
15	5.000	2.935	33	6.885	3.172
16	5.128	2.955	34	6.972	3.180
17	5.252	2.974	35	7.057	3.189
18	5.373	2.991			

* Appropriate when an unlimited number of tests about interactions might be made in a cross-classification table having a specified number of degrees of freedom.

† Appropriate when the number of tests of possible interest is specified.

scribed in table 5 by noting which two columns, and which two rows, are being compared in the subtable. The first four interactions in table 5 are calculated directly from the basic set of subtables (table 1A, 1B, 1C, 1D described in table 4); and the other five interactions in table 5 (pertaining to tables 1E, 1F, 1G, 1H, 1I) can be calculated by adding the corresponding interactions obtained from the basic set (or equivalently by multiplying the corresponding odds-ratios and taking the logarithm of the product): table 1E (interaction 1A plus 1B); table 1F (interaction 1C plus 1D); table 1G (interaction 1A plus 1C); table 1H (interaction 1B plus 1D); table 1I (interaction 1E plus 1F).

Again for those readers whose understanding is facilitated by the use of mathematical notation, we include table 6, which gives the inter

TABLE 4

A BASIC SET OF 2 × 2 SUBTABLES OF BRITISH SAMPLE

TABLE 1A

Father's Status	Subject's Status: U	M
U	588	395
M	349	714

TABLE 1B

Father's Status	Subject's Status: M	L
U	395	159
M	714	447

TABLE 1C

Father's Status	Subject's Status: U	M
M	349	714
L	114	320

TABLE 1D

Father's Status	Subject's Status: M	L
M	714	447
L	320	441

TABLE 5

INTERACTION BETWEEN SUBJECT'S STATUS AND FATHER'S STATUS IN EACH OF THE NINE 2 × 2 SUBTABLES OF THE BRITISH SAMPLE

Father's Status Comparison	Subject's Status Comparison: U Compared with M	M Compared with L	U Compared with L
U compared with M	Table 1A: 1.11 (3.05)	Table 1B: 0.44 (1.56)	Table 1E: 1.56 (4.74)
M compared with L	Table 1C: 0.32 (1.37)	Table 1D: 0.72 (2.05)	Table 1F: 1.03 (2.81)
U compared with L	Table 1G: 1.43 (4.18)	Table 1H: 1.16 (3.19)	Table 1I: 2.59 (13.33)

NOTE.—Corresponding odds-ratio in parentheses.

TABLE 6

NINE INTERACTIONS IN TABLE 5 EXPRESSED IN TERMS OF THE LOGARITHM g_{ij} OF THE OBSERVED FREQUENCY f_{ij} IN THE iTH ROW (i = 1,2,3) AND jTH COLUMN (j = 1,2,3) OF THE 3 × 3 CROSS-CLASSIFICATION TABLE

Father's Status Comparison	Subject's Status Comparison: U Compared with M	M Compared with L	U Compared with L
U compared with M	Table 1A: $g_{11}-g_{12}-g_{21}+g_{22}$	Table 1B: $g_{12}-g_{13}-g_{22}+g_{23}$	Table 1E: $g_{11}-g_{13}-g_{21}+g_{23}$
M compared with L	Table 1C: $g_{21}-g_{22}-g_{31}+g_{32}$	Table 1D: $g_{22}-g_{23}-g_{32}+g_{33}$	Table 1F: $g_{21}-g_{23}-g_{31}+g_{33}$
U compared with L	Table 1G: $g_{11}-g_{12}-g_{31}+g_{32}$	Table 1H: $g_{12}-g_{13}-g_{32}+g_{33}$	Table 1I: $g_{11}-g_{13}-g_{31}+g_{33}$

the nine 2 × 2 tables expressed in terms of the logarithms of the observed frequencies. Note that the interactions in table 6 corresponding to tables 1E, 1F, 1G, 1H can be obtained by direct calculation using the formulas in Table 6, or by adding the corresponding interactions obtained from the basic set of 2 × 2 subtables as noted in the preceding paragraph. For example, for table 1E we see that the corresponding interaction in table 6 is the sum of the interactions in table 6 pertaining to tables 1A and 1B.

Let us now suppose that the cross-classification table under consideration is a $R \times C$ table. Since a $R \times C$ table has $(R-1)(C-1)$ degrees of freedom for testing the null hypothesis of independence, all interactions of possible interest in the $R \times C$ table can be calculated directly from a basic set of $(R-1)(C-1)$ different interactions. Each of these interactions can correspond to the interaction in a 2 × 2 subtable. A basic set of 2 × 2 subtables can be obtained, for example, by selecting any given column (say, column C) and any given row (say, row R) of the $R \times C$ table, and then forming 2 × 2 subtables from the four cells that are in column C or in column j ($j = 1,2, \ldots, C-1$) and in row R or in row i ($i = 1,2, \ldots, R-1$). There will be $(R-1)(C-1)$ different subtables in the basic set, and from them we can calculate the interactions corresponding to the other 2 × 2 subtables formed from the $R \times C$ table. For the $R \times C$ table, we can compare each row with every other row (there are $R[R-1]/2$ such comparisons), and each column with every other column (there are $C[C-1]/2$ such comparisons), and so there will be $R(R-1)\,C(C-1)/4$ subtables; but all we need are the ones in the basic set (there were $[R-1][C-1]$ subtables in the basic set) in order to determine the others.

THE VARIOUS INTERACTIONS BETWEEN THE COLUMN AND ROW CLASSIFICATIONS

Note that each of the nine interactions presented in table 6 is of the following form:

$$G = \sum_{i=1}^{3}\sum_{j=1}^{3} a_{ij} g_{ij} , \tag{7}$$

where g_{ij} is the logarithm of the observed frequency f_{ij} in the ith row and jth column ($i = 1, 2, 3$; $j = 1, 2, 3$), and where the a_{ij} are a set of constants that satisfy the following equations:

$$\begin{aligned} \sum_{j=1}^{3} a_{ij} &= 0 , \qquad \text{for} \quad i = 1, 2, 3 \\ \sum_{i=1}^{3} a_{ij} &= 0 , \qquad \text{for} \quad j = 1, 2, 3 . \end{aligned} \tag{8}$$

Formula (8) states that if the constants a_{ij} are arranged as entries in a table of the form of table 1, then each row and each column of the table sums to zero.

As an example of formula (7), consider the interaction G calculated for table 2 (i.e., for table 1A of tables 4–6). From formula (1) or the corre-

sponding formula in table 6, we see that this interaction is obtained by taking $a_{11} = a_{22} = 1$, $a_{12} = a_{21} = -1$, and $a_{13} = a_{23} = a_{31} = a_{32} = a_{33} = 0$. In other words, the interaction G calculated for table 2 is the interaction (between the column and row classifications of the 3×3 cross-classification table) that blanks out the entries $(f_{13}, f_{23}, f_{31}, f_{32}, f_{33})$ in the five cells of the third column and the third row of the table.

Any set of constants a_{ij} that satisfy the set of equations (8) can be used to define an interaction G based upon formula (7). We noted above that each of the interactions pertaining to the nine 2×2 subtables (table 6) is of the form (7). Furthermore, the sum, or the average, of several such interactions will be of this form. For example, the average of the four interactions pertaining to tables 1A, 1E, 1G, and 1I will be of this form. Since these four subtables are the only 2×2 subtables having interactions that are directly affected (in a positive way) by the number of U subjects whose fathers are also U (i.e., by the entry in the $[U,U]$ cell), we shall refer to their average interaction as the interaction pertaining to status inheritance of U status (i.e., interaction $[U,U]$).[22]

From the corresponding formulas in table 6, we see that the interaction (U,U) can be expressed as

$$g_{11} - [\tfrac{1}{2}(g_{12} + g_{13} + g_{21} + g_{31}) - \tfrac{1}{4}(g_{22} + g_{23} + g_{32} + g_{33})] \,. \qquad (9)$$

Thus, this interaction is obtained by taking $a_{11} = 1$, $a_{12} = a_{13} = a_{21} = a_{31} = -\tfrac{1}{2}$, $a_{22} = a_{23} = a_{32} = a_{33} = \tfrac{1}{4}$. Here none of the entries in the 3×3 cross-classification table are blanked out. If the average interaction is zero in the four 2×2 subtables that include the entry in the (U,U) cell, then the interaction (9) will be zero, and g_{11} will be equal to the quantity in brackets in formula (9). The interaction (U,U) measures the degree to which g_{11} differs from the bracketed quantity in (9). This bracketed quantity is a function of the entries in cells other than (U,U), and it could serve as a "predictor" of g_{11} under the assumption that there is no interaction in the 2×2 subtables that include the (U,U) cell. The extent to which g_{11} actually differs from this predictor can reflect "status inheritance" of U status.[23]

[22] An individual's status category refers here to the particular category into which his occupation is classified (upper, middle, or lower status categories), and "status inheritance" refers to the probability that his status category (U, M, or L) will be exactly the same as his father's. Other terms for this concept of status inheritance may in some respects be preferable and in other respects not. This concept does not necessarily refer to the inheritance of genetic characteristics, nor does it refer to the individual's literal inheritance of his father's specific occupation, except insofar as these phenomena, in conjunction with other phenomena (e.g., socialization, education), may lead to an increase in the probability that an individual's status category is the same as his father's. Of course, if the boundaries that are used to define the status categories are changed, then the categories will pertain to a different classification of occupations, and the magnitude of the status inheritance will depend upon the particular classification under consideration.

[23] Our attention is focused here on the entry in the (U,U) cell, and we judge its relative magnitude by comparison with a certain function of the entries in the other cells in the

Having noted that the interaction (U,U) is given by formula (9), we can now define the interaction (L,L) and the interaction (M,M) by the following formulas:

$$g_{33} - [\tfrac{1}{2}(g_{13} + g_{23} + g_{31} + g_{32}) - \tfrac{1}{4}(g_{11} + g_{12} + g_{21} + g_{22})] , \quad (10)$$

$$g_{22} - [\tfrac{1}{2}(g_{12} + g_{21} + g_{23} + g_{32}) - \tfrac{1}{4}(g_{11} + g_{13} + g_{31} + g_{33})] . \quad (11)$$

Note that the interaction (L,L) defined by (10) is the average of the interactions pertaining to the four 2 × 2 subtables (tables 1D, 1F, 1H, 1I) that are directly affected (in a positive way) by the entry in the (L,L) cell. The relationship between the interaction (M,M) defined by (11) and the interactions pertaining to the four 2 × 2 subtables (tables 1A, 1B, 1C, 1D) that are directly affected by the entry in the (M,M) cell is more complicated because the effect of the entry in the (M,M) cell is positive in tables 1A and 1D but negative in tables 1B and 1C (see corresponding formulas in table 6). Because of the positive and negative effects, the interaction (M,M) defined by (11) is actually the average of the following four quantities: the interactions pertaining to tables 1A and 1D and the negative of the interactions pertaining to tables 1B and 1C.

The difference between any two interactions of the form (7) will also be of this form. For example, the difference between interaction (U,U) and interaction (M,M) is of this form. This difference can be used to compare the magnitudes of the status inheritance of U status and of M status. Similarly, we take the difference between interactions (M,M) and (L,L) to compare the magnitudes of the status inheritance of M status and of L status; and we take the difference between interactions (U,U) and (L,L) to compare the magnitudes of the status inheritance of U status and of L status.

Note that tables 1E and 1G are the only 2 × 2 subtables that are directly affected by the entry in the (U,U) cells and are not affected directly by either the (M,M) cell or the (L,L) cell. The tables 1A and 1I, which we used earlier (together with tables 1E and 1G) in defining the interaction pertaining to status inheritance of U status, are affected by the (U,U) cells, but they are also affected by the (M,M) cell and the (L,L) cell, respectively. Excluding now tables 1A and 1I, we calculate the average of the interactions pertaining to tables 1E and 1G. We shall refer to this average as the interaction pertaining to intrinsic status inheritance of U status.

From the corresponding formulae in table 6, we see that the interaction

cross-classification table. We could, of course, have written (9) in a form that would have drawn our attention to some other cell in the table or to some other phenomena that may be reflected in the table. We shall see later in this article that, in addition to status inheritance of U status, the interaction (U,U) given by (9) can reflect other phenomena as well. Because of this, we shall not be content with this measure, and shall introduce an alternative measure later in this section, namely, the interaction pertaining to the "intrinsic" status inheritance of U status.

pertaining to intrinsic status inheritance of U status can be expressed by the following formula:[24]

$$g_{11} - [\tfrac{1}{2}(g_{12} + g_{13} + g_{21} + g_{31} - g_{23} - g_{32})] \,. \tag{12}$$

Thus, this interaction is obtained by taking $a_{11} = 1$, $a_{12} = a_{13} = a_{21} = a_{31} = -\frac{1}{2}$, $a_{23} = a_{32} = \frac{1}{2}$, and $a_{22} = a_{33} = 0$. Here the entries in the cells (M,M) and (L,L) are blanked out. The interaction pertaining to intrinsic status inheritance of U status measures the degree to which g_{11} differs from the bracketed quantity in (12). This bracketed quantity is a function of the entries in the nondiagonal cells of the 3×3 cross-classification table, and it could serve as a "predictor" of g_{11} under the assumption that there is no interaction in tables 1E and 1G. The extent to which g_{11} actually differs from this predictor can reflect "intrinsic status inheritance" of U status.[25]

Having noted that the interaction pertaining to intrinsic status inheritance of U status is given by formula (12), we can now define the interactions pertaining to intrinsic status inheritance of L status and to intrinsic status inheritance of M status by

$$g_{33} - [\tfrac{1}{2}(g_{13} + g_{23} + g_{31} + g_{32} - g_{12} - g_{21})] \,, \tag{13}$$

and by

$$g_{22} - [\tfrac{1}{2}(g_{12} + g_{21} + g_{23} + g_{32} - g_{13} - g_{31})] \,, \tag{14}$$

respectively. The interaction (13) blanks out the entries in the cells (U,U) and (M,M), and it is the average of the interactions pertaining to tables 1F and 1H. The interaction (14) blanks out the entries in the cells (U,U) and (L,L), and it is the negative of the average of the interactions pertaining to tables 1B and 1C.

[24] Note that formula (12) can also be expressed as the logarithm of

$$f_{11}/[(f_{12}f_{13}f_{21}f_{31})/(f_{23}f_{32})]^{1/2} \,.$$

A similar kind of remark applies to the formulas (1), (7), (9)–(16) herein.

[25] A remark similar to that made in the first two sentences of footnote 23 would be in order here too. It should also be noted that, if there is "quasi-perfect mobility" (i.e., "quasi-independence" between the column classification and the row classification) when the three diagonal entries in the 3×3 cross-classification table are blanked out (see Goodman 1965b, 1968, and related comments later in the present article), then the only phenomenon measured by the interaction (12) is the degree to which g_{11} is larger than its predictor (in that case, we have "intrinsic status inheritance") or smaller than its predictor (in that case, we have "intrinsic status disinheritance"). As noted in the earlier articles cited above, the data considered here do exhibit this quasi-perfect mobility. (Our use here of the general concept of "quasi-perfect mobility" to assist with the interpretation of the interaction [12] could also have been employed in footnote 23 to assist with the interpretation of the interaction [9], but in that case the particular kind of "quasi-perfect mobility" that would have been relevant would have been for the case where only the entry in the (U,U) cell of the 3×3 table is blanked out. That particular kind of quasi-perfect mobility is contradicted by the data.)

The sum of the interactions (12)–(14) is

$$(g_{11} + g_{22} + g_{33}) - [\tfrac{1}{2}(g_{12} + g_{13} + g_{21} + g_{23} + g_{31} + g_{32})] \,. \qquad (15)$$

We shall call this sum the interaction pertaining to intrinsic net status inheritance of all statuses.[26] We would, of course, also want to compare the magnitudes of the intrinsic status inheritance of U status and of M status, etc. The difference between, say, the interactions pertaining to intrinsic status inheritance of U status and of M status (as defined by formulas [12] and [14]) is actually equal to $\frac{3}{4}$ of the difference between the interactions (U,U) and (M,M) (as defined by formulas [9] and [11]). Thus, the standardized value of the former difference is identical with the standardized value of the latter difference. A similar remark also applies when U status and L status are compared, and when M status and L status are compared.

Let us now consider the interaction defined as follows:

$$G = g_{12} + g_{23} + g_{31} - g_{13} - g_{32} - g_{21} \,. \qquad (16)$$

For this interaction, $a_{12} = a_{23} = a_{31} = 1$, $a_{13} = a_{32} = a_{21} = -1$, and $a_{11} = a_{22} = a_{33} = 0$. The three diagonal cells are blanked out. This interaction is not affected directly by the number of subjects who are in the same status categories as their fathers. This particular interaction could also be obtained by subtracting the interactions pertaining to tables 1B and 1C (or to tables 1E and 1G, or to tables 1H and 1F). If this interaction calculated by formula (16) is zero for table 1, then the interactions in tables 1B and 1C are equal, the interactions in tables 1E and 1G are equal, and the interactions in tables 1H and 1F are equal. Furthermore, if the interaction calculated by formula (16) is zero, then the model of quasi-perfect mobility, as defined in my earlier article (1965*b*), will fit table 1 when the three diagonal cells are blanked out.[27]

We can formulate still other interactions, which may be of interest in a particular context, by specifying the set of cells that are to be blanked out, and then determining the possible values of the a_{ij} for the cells that are not blanked out (see, for example, formulas [1], [12]–[14], [16]). This can also be done by considering the interaction obtained by subtracting any pair of interactions of interest, or by considering the interaction obtained by adding together (or by averaging) any set of interactions of interest. By these methods we obtain other sets of a_{ij} that satisfy (8), and thus other interactions between the column and row classifications of the 3×3 table. To illustrate the methods presented here, we shall confine our attention to the particular twenty interactions defined in the preceding paragraphs: namely, the interactions pertaining to the nine 2×2 subtables; the interactions (U,U), (M,M), and (L,L); the differences between interactions

[26] A remark similar to footnote 25 would apply here too.

[27] For a 3×3 cross-classification table in which the diagonal cells are blanked out, the definition of quasi-perfect mobility, as given in the article, is equivalent to the condition that the interaction (16) is zero for the corresponding population table; see my later article (1968) for further discussion of this point.

(U,U) and (M,M), between interactions (M,M) and (L,L), and between interactions (U,U) and (L,L); the interactions pertaining to the intrinsic status inheritance of U status, of M status, and of L status; the interaction pertaining to intrinsic net status inheritance of all statuses; and the interaction obtained by blanking out the diagonal cells.[28]

TABLE 7

STANDARDIZED VALUE OF 20 INTERACTIONS BETWEEN SUBJECT'S STATUS AND FATHER'S STATUS IN BRITISH SAMPLE

Interaction Due to	Standardized Value
U or M fathers and U or M subjects (table 1A)	12.08
U or M fathers and M or L subjects (table 1B)	3.96
U or M fathers and U or L subjects (table 1E)	13.59
M or L fathers and U or M subjects (table 1C)	2.49
M or L fathers and M or L subjects (table 1D)	7.49
M or L fathers and U or L subjects (table 1F)	8.10
U or L fathers and U or M subjects (table 1G)	11.26
U or L fathers and M or L subjects (table 1H)	9.68
U or L fathers and U or L subjects (table 1I)	18.70
Status inheritance of U status (interaction $[U,U]$)	19.45
Status inheritance of M status (interaction $[M,M]$)	3.69
Status inheritance of L status (interaction $[L,L]$)	15.32
Difference between interaction (U,U) and (M,M)	12.20
Difference between interaction (M,M) and (L,L)	− 9.47
Difference between interaction (U,U) and (L,L)	3.24
Intrinsic status inheritance of U status (with blank $[M,M]$ and $[L,L]$)	16.53
Intrinsic status inheritance of M status (with blank $[U,U]$ and $[L,L]$)	− 4.28
Intrinsic status inheritance of L status (with blank $[U,U]$ and $[M,M]$)	11.64
Intrinsic net status inheritance of all statuses	20.19
Fathers and subjects with different statuses (with blank diagonal cells)	0.78

The standard error of the interaction G defined by (7) can be calculated as follows:

$$S = \left(\sum_{i=1}^{3}\sum_{j=1}^{3} a_{ij}^2 \Big/ f_{ij}\right)^{1/2} . \tag{17}$$

If we divide the observed interaction G by its standard error, we get the following standardized value:[29]

$$Z = G/S . \tag{18}$$

For the data in table 1, the standardized values of the twenty interactions (between subject's status and father's status), described above, are given in table 7.

Each of the twenty interactions can be tested to see if it differs signifi-

[28] As we noted earlier, the standardized value of the difference between the interactions pertaining to intrinsic status inheritance of U status and of M status is equal to the standardized value of the difference between interactions (U,U) and (M,M). A similar remark also applies when U status and L status are compared, and when M status and L status are compared.

[29] See footnote 15.

cantly from zero. In each test, the absolute value of the corresponding
would be compared with the constant 3.02 (rather than 1.96).[30] We se
from table 7 that the largest standardized value pertaining to the 2 ×
subtables is the one for table 1I (*U* or *L* fathers and *U* or *L* subjects), whic
is, however, smaller than the standardized values of the interaction pe
taining to status inheritance of *U* status and of the interaction pertainin
to intrinsic net status inheritance of all statuses. Furthermore, the inte
action (*U*,*U*) is significantly larger than the interaction (*L*,*L*), which i
turn is significantly larger than the interaction (*M*,*M*).

From table 7 we also see that, although the interaction (*M*,*M*) was pos
tive, the interaction pertaining to intrinsic status inheritance of *M* statu
was negative, and that this negative value differed from zero in a stati
tically significant way. In the *M* status category, there was intrinsic statu
disinheritance, rather than status inheritance.[31] We shall return to th
point in a later section.

Table 7 also shows us that the standardized value of the interaction ol
tained when the diagonal cells are blanked out is strikingly small.[32] Th
indicates that the model of quasi-perfect mobility fits the data in table
when the diagonal cells are blanked out. Although the method used he
for studying quasi-perfect mobility is quite different from the method
used earlier (1965*b*), the conclusion concerning quasi-perfect mobility i
table 1, which was arrived at in the earlier work, is confirmed by the preser
analysis.[33]

[30] See table 6 and related comments earlier in the present article. If the twenty intera
tions do not include all the interactions that may be of interest in the present co
text, then the constant 3.02 should be replaced by the appropriate constant which ca
be calculated once the total number of interactions of possible interest has been dete
mined. If the total number of interactions of possible interest cannot be determined, the
the constant 3.08 should be used instead of 3.02.

[31] Since the interaction pertaining to intrinsic status inheritance of *M* status (which w
defined by formula [14]) was the negative of the average of the interactions pertaining t
tables 1B and 1C, the negative value obtained in table 7 for the interaction pertainin
to intrinsic status inheritance of *M* status describes the same phenomenon as the positi
value obtained for the average of the interactions pertaining to tables 1B and 1C. Th
analysis presented herein will suggest that the data in table 1 reflect (*a*) quasi-perfe
mobility for the nondiagonal entries, (*b*) status inheritance of *U* status and of *L* statu
and (*c*) status disinheritance of *M* status. In particular we suggest that the data i
tables 1B and 1C reflect (*a*) and (*c*). Although we "explain" the data in tables 1B and 1
by (*a*) and (*c*), other kinds of "explanations" of the data (which make use of other co
cepts) may also be possible; in which case, these other "explanations" of the data ma
also serve as "explanations" of the observed negative interaction pertaining to intrins
status inheritance of *M* status (i.e., of the positive value obtained for the average in
teraction in the tables).

[32] Even if the constant 1.96 were used instead of 3.02, the observed value of *Z* woul
be strikingly small. Use of the constant 1.96 (rather than 3.02) would reduce the proba
bility of errors of the second kind (of accepting the null hypothesis—that the corre
sponding interaction is zero—when it is false), but it would increase the probability
errors of the first kind (of rejecting the null hypothesis when it is true).

[33] With respect to the results presented in my earlier article concerning quasi-perfe
mobility in the corresponding 3 × 3 table obtained from a sample of Danish males, th
conclusions about these Danish data are also confirmed by the present method of ana
ysis. In the next section, we shall compare the interactions in the British and Danish dat

We have discussed above the testing of a set of hypotheses concerning the various interactions between the column and row classifications of a cross-classification table. Formulas (7) and (17) can also be used to estimate the size of these interactions and to obtain simultaneous confidence intervals for them.[34]

COMPARING TWO (OR MORE) CROSS-CLASSIFICATION TABLES

To illustrate the methods presented in this section, we shall compare the British data (table 1) with the corresponding Danish data presented in table 8. This table is based upon data obtained by Svalastoga.[35] It provides a cross-classification of a sample of 2,391 males in Denmark according to each subject's occupational status category and his father's occupational status category.

TABLE 8

CROSS-CLASSIFICATION OF SAMPLE OF DANISH MALES ACCORDING TO EACH SUBJECT'S STATUS CATEGORY AND HIS FATHER'S STATUS CATEGORY

Father's Status	Subject's Status		
	U	*M*	*L*
U	685	280	118
M	232	348	198
L	83	201	246

NOTE.—This table referred to as Danish sample in following tables.

From table 8 we can obtain a basic set of four 2 × 2 subtables (as in table 4), and from these four subtables we can then calculate the interaction in each of the nine 2 × 2 subtables (as in table 5). The results corresponding to table 4 are given in table 9 for the Danish data. Each of the nine different subtables of table 8 (tables 8A–8I) are described in table 9 by noting which two columns, and which two rows, are being compared in the subtable. For the data in table 8, we can also calculate (as in table 7) the standardized value of each of the twenty interactions considered in the preceding section. These values are given in table 10.

Although there are some differences between the pattern of standardized values given in table 10 (Danish sample) and those given in table 7 (British

[34] The actual magnitudes of the interactions (or the corresponding generalized odds-ratios), and the simultaneous confidence intervals for the interactions in the population, will often be of more interest than the corresponding standardized values given here. See my article (1964b) for further details. For simplicity of exposition, we have confined our attention here to the standardized values.

[35] The upper-, middle-, and lower-status categories in table 8 correspond to the occupational status categories 1–6, 7, 8–9, respectively, as defined by Svalastoga (1959).

sample), the particular comments which were made in the preceding section concerning the results presented in table 7 would apply as well to table 10. Note the following: (*a*) the size of the standardized value for the interaction pertaining to table 8I compared with the standardized values for the interactions pertaining to status inheritance of *U* status and to intrinsic net status inheritance for all statuses; (*b*) the standardized values for the differences between the interactions (*U*,*U*), (*L*,*L*), and (*M*,*M*); (*c*) the standardized value for the interaction pertaining to intrinsic status in-

TABLE 9

INTERACTION BETWEEN SUBJECT'S STATUS AND FATHER'S STATUS IN EACH OF THE NINE 2 × 2 SUBTABLES OF THE DANISH SAMPLE

	Subject's Status Comparison		
Father's Status Comparison	*U* Compared with *M*	*M* Compared with *L*	*U* Compared with *L*
U compared with *M*	Table 8A: 1.30 (3.67)	Table 8B: 0.30 (1.35)	Table 8E: 1.60 (4.95)
M compared with *L*	Table 8C: 0.48 (1.61)	Table 8D: 0.77 (2.15)	Table 8F: 1.24 (3.47)
U compared with *L*	Table 8G: 1.78 (5.92)	Table 8H: 1.07 (2.90)	Table 8I: 2.85 (17.21)

NOTE.—Corresponding odds-ratio in parentheses.

TABLE 10

STANDARDIZED VALUE OF 20 INTERACTIONS BETWEEN SUBJECT'S STATUS AND FATHER'S STATUS IN DANISH SAMPLE

Interaction Due to	Standardized Value
U or *M* fathers and *U* or *M* subjects (table 8A)	11.76
U or *M* fathers and *M* or *L* subjects (table 8B)	2.12
U or *M* fathers and *U* or *L* subjects (table 8E)	11.52
M or *L* fathers and *U* or *M* subjects (table 8C)	3.08
M or *L* fathers and *M* or *L* subjects (table 8D)	5.88
M or *L* fathers and *U* or *L* subjects (table 8F)	7.80
U or *L* fathers and *U* or *M* subjects (table 8G)	11.98
U or *L* fathers and *M* or *L* subjects (table 8H)	7.34
U or *L* fathers and *U* or *L* subjects (table 8I)	17.63
Status inheritance of *U* status (interaction [*U*,*U*])	19.18
Status inheritance of *M* status (interaction [*M*,*M*])	3.40
Status inheritance of *L* status (interaction [*L*,*L*])	13.26
Difference between interaction (*U*,*U*) and (*M*,*M*)	11.13
Difference between interaction (*M*,*M*) and (*L*,*L*)	− 8.22
Difference between interaction (*U*,*U*) and (*L*,*L*)	3.49
Intrinsic status inheritance of *U* status (with blank [*M*,*M*] and [*L*,*L*])	16.06
Intrinsic status inheritance of *M* status (with blank [*U*,*U*] and [*L*,*L*])	− 3.49
Intrinsic status inheritance of *L* status (with blank [*U*,*U*] and [*M*,*M*])	9.88
Intrinsic net status inheritance of all statuses	18.30
Fathers and subjects with different statuses (with blank diagonal cells)	− 0.91

heritance of M status; and (*d*) how small the interaction is when the diagonal cells have been blanked out.[36]

Each of the interactions calculated for the Danish sample could be compared with the corresponding interaction in the British sample. For an interaction G_1 in the British sample and the corresponding interaction G_2 in the Danish sample, we can calculate the difference

$$D = G_1 - G_2 . \tag{19}$$

The value of D is given in table 11 for the interactions pertaining to each of the nine 2×2 subtables of the 3×3 tables (tables 1 and 8). Note that

TABLE 11

DIFFERENCE BETWEEN BRITISH AND DANISH SAMPLES WITH RESPECT TO THE INTERACTIONS* IN EACH OF THE NINE 2 × 2 SUBTABLES OF EACH SAMPLE†

Father's Status Comparison	Subject's Status Comparison		
	U Compared with *M*	*M* Compared with *L*	*U* Compared with *L*
U compared with *M*..	Tables 1A and 8A: −0 18 (0 83)	Tables 1B and 8B: 0 14 (1 15)	Tables 1E and 8E: −0.04 (0.96)
M compared with *L*..	Tables 1C and 8C: −0.16 (0 85)	Tables 1D and 8D: −0 05 (0.95)	Tables 1F and 8F: −0 21 (0.81)
U compared with *L*...	Tables 1G and 8G: −0.35 (0 71)	Tables 1H and 8H: 0 09 (1.10)	Tables 1I and 8I: −0.26 (0.77)

NOTE.—Ratio of corresponding odds-ratios in parentheses.
* Interactions are between subject's status and father's status.
† Tables 1 and 8.

all but two of these differences are negative, which indicates that the interactions between subject's status and father's status in the Danish sample are somewhat larger on the whole than the corresponding interactions for the British sample. We shall gain some further insight into this matter later in the following section.

The standard error S_D of the difference D is calculated as follows:

$$S_D = (S_1^2 + S_2^2)^{1/2} , \tag{20}$$

where S_1 and S_2 are the standard errors of G_1 and G_2, respectively. As with formula (18), if we divide the observed difference D by its standard error, we get the standardized value

$$Z = D/S_D . \tag{21}$$

For the data in tables 1 and 8, the standardized value for the difference between the twenty interactions, which we considered earlier, are given in table 12.

[36] See footnote 33.

From table 12 we see that most of the standardized values are negative, and that none of them are statistically significant. Note that the three standardized values that are largest in absolute value pertain to various aspects of status inheritance of *U* status. (Table 1G is used in the calculation of the interactions pertaining to status inheritance of *U* status.) Thus, the interactions pertaining to status inheritance of *U* status are larger in

TABLE 12

STANDARDIZED VALUE OF DIFFERENCE BETWEEN BRITISH AND DANISH SAMPLES WITH RESPECT TO 20 INTERACTIONS BETWEEN SUBJECT'S STATUS AND FATHER'S STATUS

Interaction Due to	Standardized Value
U or *M* fathers and *U* or *M* subjects (tables 1A and 8A)	−1.30
U or *M* fathers and *M* or *L* subjects (tables 1B and 8B)	0.79
U or *M* fathers and *U* or *L* subjects (tables 1E and 8E)	−0.25
M or *L* fathers and *U* or *M* subjects (tables 1C and 8C)	−0.81
M or *L* fathers and *M* or *L* subjects (tables 1D and 8D)	−0.29
M or *L* fathers and *U* or *L* subjects (tables 1F and 8F)	−1.03
U or *L* fathers and *U* or *M* subjects (tables 1G and 8G)	−1.79
U or *L* fathers and *M* or *L* subjects (tables 1H and 8H)	0.50
U or *L* fathers and *U* or *L* subjects (tables 1I and 8I)	−1.20
Status inheritance of *U* status (interaction [*U*,*U*])	−1.60
Status inheritance of *M* status (interaction [*M*,*M*])	−0.44
Status inheritance of *L* status (interaction [*L*,*L*])	−0.73
Difference between interaction (*U*,*U*) and (*M*,*M*)	−0.86
Difference between interaction (*M*,*M*) and (*L*,*L*)	0.28
Difference between interaction (*U*,*U*) and (*L*,*L*)	−0.71
Intrinsic status inheritance of *U* status (with blank [*M*,*M*] and [*L*,*L*])	−1.42
Intrinsic status inheritance of *M* status (with blank [*U*,*U*] and [*L*,*L*])	0.08
Intrinsic status inheritance of *L* status (with blank [*U*,*U*] and [*M*,*M*])	−0.39
Intrinsic net status inheritance of all statuses	−1.41
Fathers and subjects with different statuses (with blank diagonal cells)	1.20

the Danish study than in the British study, but the differences are not statistically significant.[37]

SOME RELATED METHODS FOR COMPARING TWO (OR MORE) CROSS-CLASSIFICATION TABLES

Table 12 is useful when we wish to examine the difference between each of the twenty interactions in the British sample and the corresponding interactions in the Danish sample in order to determine which (if any) are significantly different from zero. If we are interested simply in an overall test of the null hypothesis that all of these differences are zero for the cor-

[37] We shall see in a later section that, when the *U* status category is divided into three separate status categories (i.e., when each of the individuals in the *U* status category is reclassified into one of three different high status categories rather than grouped into a single *U* category), the difference between the social mobility patterns in the British and Danish studies is statistically significant with respect to status inheritance among those in the three high status categories.

responding population tables, we would reject the null hypothesis if any of the twenty standardized values were greater in absolute value than 3.02.[38]

But if we are interested in an overall test of the null hypothesis that all the interactions in the British population table are equal to the corresponding interactions in the Danish population table, it is actually not necessary to calculate the standardized value for the differences between each interaction in the British and Danish samples, as we did in table 12. Indeed, if we were interested in *all* the interactions (i.e., in the difference corresponding to each interaction in the 3 × 3 tables), it would not be sufficient to study by this method only the twenty differences considered in table 12, since there may be some other interaction in the 3 × 3 tables that would lead to a significantly large standardized value for the corresponding difference even though none of the twenty differences did. We provide below procedures that are suitable for testing the null hypothesis that all the interactions in the British population table are equal to the corresponding interactions in the Danish table.

As we noted earlier, all the interactions in a 3 × 3 table (with its 2 × 2 = 4 degrees of freedom) can be calculated from a set of four interactions that pertain to a basic set of four 2 × 2 subtables. Similarly, all the differences between the corresponding interactions in two different 3 × 3 tables can be calculated from a set of four differences that pertain to the differences between the corresponding interactions in the basic set of 2 × 2 subtables. Taking tables 1A, 1B, 1C, and 1D as the basic set (together with the corresponding tables 8A, 8B, 8C, and 8D), we see from table 11 that the basic set of four differences are −0.18, 0.14, −0.16, −0.05, respectively. It is possible to test whether the observed basic vector (−0.18, 0.14, −0.16, −0.05) differs significantly from the zero vector (0,0,0,0). The null hypothesis that the basic vector of differences between the two populations is the zero vector is equivalent to the null hypothesis that *all* the interactions in the British population table are equal to the corresponding interactions in the Danish population table. Applying the test of this null hypothesis presented in my article (1964*c*), we obtain a χ^2 value of 4.09.[39] Since we are studying the differences between two 3 × 3 tables (with 4 degrees of freedom in the 3 × 3 table), the χ^2 value obtained (4.09) should be compared with the usual percentiles of the χ^2 distribution with 4 degrees of freedom.[40]

[38] If we do not limit the number of possible interactions that we might investigate by this method, then the constant 3.02 would be replaced by 3.08, as we noted earlier.

[39] The same χ^2 value would have been obtained even if a different basic set of four subtables had been used. For example, the basic set obtained with tables 1D, 1F, 1H, 1I (and the corresponding tables 8D, 8F, 8H, 8I), or with tables 1A, 1E, 1G, 1I (and the corresponding tables 8A, 8E, 8G, 8I), could have been used instead of the set obtained with tables 1A, 1B, 1C, 1D (and the corresponding Tables 8A, 8B, 8C, 8D). Indeed, a basic set can be formed corresponding to the following lines from tables 7 and 10: the first (tables 1A and 8A), the fifth (tables 1D and 8D), seventeenth (intrinsic status inheritance of *M* status), and twentieth (fathers and subjects with different statuses). For further discussion of this test, see the article.

[40] Note that the observed basic vector has four entries in it corresponding to the 4 degrees of freedom. More generally, when comparing S different $R \times C$ tables, there will be $(R - 1)(C - 1)(S - 1)$ degrees of freedom for the test discussed here

Thus, the observed basic vector does not differ significantly from the zero vector.

As we noted above, the test of whether the interactions in one of the 3 × 3 tables differs significantly from the corresponding interactions in the other 3 × 3 table is a test of the null hypothesis that the differences between the corresponding interactions are all equal to zero for the population tables. The two 3 × 3 tables (tables 1 and 8) can also be viewed as a single 3 × 3 × 2 table in which the rows, columns, and layers of the table denote the subject's status category of origin, status category of destination, and country of residence, respectively. The χ^2 test used in the preceding paragraph, which was presented in my article (1964c), is a test of whether there are no differences between the corresponding interactions in the two 3 × 3 population tables, and it can also be used to test the null hypothesis that

TABLE 13

CROSS-CLASSIFICATION OF BRITISH AND DANISH MALE SAMPLES ACCORDING TO EACH SUBJECT'S STATUS CATEGORY AND HIS FATHER'S STATUS CATEGORY

Father's Status	Subject's Country of Residence	Subject's Status		
		U	*M*	*L*
U.............	Britain	588	395	159
	Denmark	685	280	118
M.............	Britain	349	714	447
	Denmark	232	348	198
L.............	Britain	114	320	411
	Denmark	83	201	246

all three-factor interactions in the 3 × 3 × 2 population table are equal to zero. We shall comment further below on the χ^2 test used in the preceding paragraph, and also on a different test of this hypothesis.

The 3 × 3 × 2 table can be rearranged as in table 13, in which we have a 2 × 3 table describing the pattern of mobility in Britain and in Denmark for those with *U* origins, and similarly two other 2 × 3 tables pertaining to those with *M* origins and those with *L* origins. The null hypothesis that all three-factor interactions in the 3 × 3 × 2 table are equal to zero is equivalent to the hypothesis that the interactions in the 2 × 3 table pertaining to origin *U* are equal to the corresponding interactions in the 2 × 3 table pertaining to origin *M*, which in turn are equal to the corresponding interactions in the 2 × 3 table pertaining to origin *L*.[41] For each 2 × 3 table (with its 2 degrees of freedom), we can obtain a basic set of two 2 × 2 subtables (e.g., by comparing subject's status *U* with status *M* and subject's status *M* with status *L*), and for each subtable in the basic set we can calculate the interaction between its column and row classifications. These

[41] Note that this hypothesis states that the corresponding interactions in the three 2 × 3 tables are equal to each other. This hypothesis is quite different from the hypothesis that the interactions in the three 2 × 3 tables are all equal to zero.

interactions are given in table 14.[42] From this table we see that the hypothesis to be tested is that the three vectors (−0.50, 0.05), (−0.31, −0.10), and (−0.15, −0.05), corresponding to origin *U*, *M*, and *L*, respectively, do not differ significantly from each other. The χ^2 test used in the paragraph before the preceding one can be used to test this hypothesis. We noted there that a χ^2 value of 4.09 (with 4 degrees of freedom) was obtained, which is not statistically significant.

From table 14 we see that the interactions pertaining to origin *L* are larger than the corresponding interactions pertaining to origin *M*, which in turn are larger than the corresponding interactions pertaining to origin *U* (except in the comparison of subject's status *M* with status *L*, where the interaction pertaining to origin *U* is larger than the other two). It is because

TABLE 14

INTERACTION BETWEEN SUBJECT'S STATUS AND COUNTRY OF RESIDENCE FOR EACH CATEGORY OF FATHER'S STATUS

Father's Status	Subject's Status Comparison		
	U with *M*	*M* with *L*	*U* with *L*
U	−0.50 (0.61)	0.05 (1 05)	−0.45 (0.64)
M	−0.31 (0.73)	−0.10 (0.91)	−0.41 (0.67)
L	−0.15 (0 86)	−0 05 (0.95)	−0 20 (0.82)

NOTE.—Corresponding odds-ratio in parentheses.

of this pattern in which the interactions decrease from origin *L* to origin *M* to origin *U* (with the exception noted above), that the differences presented in table 11 were all negative except in the comparison of subject's status *M* with status *L*, when the origin *U* is compared with the other two origins. Thus, the analysis of the data arranged as in table 13 sheds further light on the earlier analysis in which a different arrangement of the data was used.

As we have noted, the χ^2 test used here is a test of the null hypothesis that the three-factor interactions are zero in the $3 \times 3 \times 2$ table corresponding to tables 1 and 8 (or as described in table 13). A different method for testing this null hypothesis could be based upon the following procedure: First, estimate the frequencies that would be expected in the $3 \times 3 \times 2$ table under the assumption that the null hypothesis is true, and then compare these expected frequencies with the corresponding observed frequencies using the usual χ^2 goodness-of-fit statistic.[43] Applying this

[42] For the sake of completeness, we have also included in table 14 the interactions obtained when subject's status *U* is compared with status *L*, though these interactions are not part of the basic set. Note that each interaction pertaining to the comparison of subject's status *U* with status *L* is the sum of the corresponding interactions for the other two comparisons of subject's statuses.

[43] This procedure for testing the null hypothesis of no three-factor interaction, which we call the BFNRKLD test (for Bartlett-Fisher-Norton-Roy-Kastenbaum-Lamphiear-Darroch), is described in my article (1964c).

procedure to the data studied here, we obtain the expected frequencies given in table 15 and a value of 4.10 is obtained for the χ^2 goodness-of-fit statistic comparing the expected frequencies in table 15 with the corresponding observed frequencies in tables 1 and 8. This χ^2 value (4.10) should be compared with the usual percentiles of the χ^2 distribution with 4 degrees of freedom (as with the other χ^2 test used in this section).[44]

TABLE 15

PREDICTED MOBILITY PATTERN FOR BRITISH AND DANISH SAMPLES: INTERACTIONS BETWEEN SUBJECT'S STATUS AND FATHER'S STATUS IN BRITISH POPULATION ARE ASSUMED EQUAL TO THE CORRESPONDING INTERACTIONS IN DANISH POPULATION

FATHER'S STATUS	BRITISH SUBJECT'S STATUS			FATHER'S STATUS	DANISH SUBJECT'S STATUS		
	U	*M*	*L*		*U*	*M*	*L*
U...........	601.3	381.9	158.9	*U*...........	671.7	293.1	118.1
M..........	344.8	722 1	443.1	*M*...........	236.2	339.9	201.9
L............	104.9	325.1	415.0	*L*............	92.1	195.9	242.1

QUASI-INDEPENDENCE AND THE INTERACTIONS BETWEEN THE COLUMN AND ROW CLASSIFICATIONS OF A CROSS-CLASSIFICATION TABLE

If the column classification is independent of the row classification in a table (say, table 1), then all the interactions (between the column and row classifications of the table), as defined by formula (7) will be equal to zero, and vice versa. This relationship between the concept of independence in a cross-classification table and the interactions defined by formula (7) can be extended to a similar relationship between the concept of "quasi-independence" (or "quasi-perfect mobility"), as defined in my article (1965*b*), and a subset of these interactions.[45] For example, as we noted in an earlier section of the present paper, considering the 3×3 table (table 1) with the three cells on the main diagonal blanked out, if the column and row classifications are quasi-independent, then the interaction defined by formula (16) will be equal to zero, and vice versa (Note that the constants a_{ij} in formula [16] are equal to zero for the three blanked out cells.) Similarly, considering the 3×3 table (table 1) with the two cells (M,M) and (L,L) blanked out, if the column and row classifications are quasi-independent, then the interactions defined by formulas (12) and (16) will be equal to zero, and vice versa. (Note that the constants a_{ij} in formulas [12] and [16] are equal to zero for the two blanked out cells.) More generally,

[44] See second sentence of footnote 40.

[45] The term "quasi-perfect mobility" was used in my article to refer to this concept, rather than the more general term "quasi-independence," in order to emphasize its applicability to social mobility tables. As was noted in that article, the concepts and methods developed there can also be applied to other kinds of cross-classification tables.

considering a cross-classification table with a subset of the cells in the table blanked out, and the corresponding subset of the interactions defined by formula (7) for which the constants a_{ij} are equal to zero for the cells that have been blanked out, if the column and row classifications in the table are quasi-independent, then the corresponding subset of the interactions will be equal to zero, and vice versa.[46]

This equivalence between the concept of quasi-independence and the corresponding subset of the interactions defined by formula (7) can shed further light on both the analysis of quasi-independence and on the analysis of interactions. For example, let us consider the following two null hypotheses: (*a*) quasi-independence in table 1 with the three diagonal cells blanked out; and (*b*) quasi-independence in table 1 with the two diagonal cells (*U*,*U*) and (*L*,*L*) blanked out. For each of these null hypotheses, the χ^2 goodness-of-fit statistic comparing the observed frequencies with the frequencies that would be expected (under the null hypothesis) can be calculated, and the values obtained are 0.61 and 20.20, respectively, for hypothesis (*a*) and (*b*).[47] From the preceding paragraph, we see that the null hypothesis (*a*) states that the interaction is zero when only fathers and sons with different statuses are considered (i.e., that the interaction due to fathers and sons with different statuses is zero in the population), and the null hypothesis (*b*) states that, in addition (to null hypothesis [*a*] being true), the interaction pertaining to intrinsic status inheritance of *M* status is zero. Since null hypothesis (*b*) is a special case of null hypothesis (*a*), by subtracting the corresponding two χ^2 values (20.20 − 0.61), the difference obtained (19.59) provides us with a χ^2 value (with 1 degree of freedom) for testing the null hypothesis that the interaction pertaining to intrinsic status inheritance of *M* status is zero, when the null hypothesis (*a*) is true.[48] Thus, comparing the difference (19.59) with the usual percentiles of the χ^2 distribution with 1 degree of freedom, we reject the null hypothesis that the interaction pertaining to intrinsic status inheritance of *M* status is zero.[49]

[46] For further details, see my article (1968).

[47] These numerical results were given in my article (1965*b*). In addition to the χ^2 goodness-of-fit statistics, that article gave several other methods for comparing the expected frequencies with the observed frequencies. For the sake of simplicity and brevity, we shall not discuss these other methods here, though they are useful.

[48] As was noted in my article (1965*b*), the difference has 1 degree of freedom in the present context; it is the difference between a χ^2 value with 2 degrees of freedom and a χ^2 value with 1 degree of freedom. In the earlier article, the corresponding value based upon the likelihood-ratio statistics was used, rather than the goodness-of-fit statistics.

[49] Note that the difference obtained (19.59) is of the same order of magnitude as the square of the standardized value *Z* (in table 7) corresponding to the interaction pertaining to intrinsic status inheritance of *M* status. Note also that the value obtained (0.61) for the goodness-of-fit statistic for testing null hypothesis (*a*) is of the same order of magnitude as the square of the standardized value *Z* (in table 7) corresponding to the interaction pertaining to fathers and sons with different statuses. Under the null hypothesis (*a*), the value obtained for the goodness-of-fit statistic is asymptotically equivalent to the corresponding Z^2; and a similar remark applies to the difference obtained under the null

The preceding calculations were based upon the British data (table 1). A similar analysis of the Danish data (table 8) could be made. The conclusions obtained with the Danish data are similar to those presented above.

QUASI-HOMOGENEITY AND THE DIFFERENCES BETWEEN THE INTERACTIONS IN TWO (OR MORE) CROSS-CLASSIFICATION TABLES

As we noted in the preceding section, the concept of quasi-independence is a generalization of the usual concept of independence in the $R \times C$ cross-classification table which is suited to the situation where the entries in certain cells of the table are blanked out. It states that all the interactions (between the column and row classifications of the table), which are calculated from the cells that are not blanked out, are equal to zero. Similarly, the concept that two different $R \times C$ tables are homogeneous (with respect to the corresponding interactions in each table) can be generalized to obtain the concept of "quasi-homogeneity" of the two $R \times C$ tables. This concept is suited to the situation where the corresponding entries in certain cells of each table are blanked out.[50] It states that the differences between the corresponding interactions in each table are equal to zero, when we consider only those interactions which are calculated from the cells that are not blanked out. We shall now illustrate the application of this concept of quasi-homogeneity by reconsidering the comparisons of tables 1 and 8 presented earlier.

We noted in the section before the preceding one that the null hypothesis that the two population tables were homogeneous (with respect to the corresponding interactions in each table) could be tested by first calculating the frequencies that would be expected in the tables under the assumption that the null hypothesis is true (see table 15), and then comparing these expected frequencies with the corresponding observed frequencies using the usual χ^2 goodness-of-fit statistic. We obtained, by this method, a value of 4.10 for the χ^2 goodness-of-fit statistic (with 4 degrees of freedom). With this observed value, we would not reject the null hypothesis of homogeneity. Recall, however, that in our earlier analysis of the differences between the interactions in tables 1 and 8 (see table 12), when considering the three standardized values that were largest in absolute value, we found that all of these pertain to various aspects of status inheritance of U status. We shall now consider briefly the null hypothesis of quasi-homogeneity of tables 1 and 8 when the fathers and sons with the same U status (i.e., cell $[U,U]$) are blanked out.

With respect to this null hypothesis, the expected frequencies for the

hypothesis (*b*). As in the earlier analysis of the Z values, if all the interactions in table 1 were of possible interest, then the relevant percentiles in judging each Z^2 value (or the corresponding χ^2 values) are obtained from the χ^2 distribution with 4 degrees of freedom.

[50] The concept can also be applied in some situations where a different set of cell entries has been blanked out in each $R \times C$ table. For further details, see my article (1968).

British and Danish data (i.e., the frequencies expected under the null hypothesis) can be calculated using the methods described in my article (1968). These expected frequencies are given in table 16 herein. These are the frequencies that would be expected under the assumption that the British and Danish population tables are quasi-homogeneous (with respect to the corresponding interactions between the column and row classifications) when subjects with the same *U* status as their fathers are blanked out in each country. Note that by blanking out the cell (*U*,*U*) in both the British and Danish data, we are calculating the expected frequencies in the other cells without assuming that status inheritance of *U* status is the same in both countries (i.e., we are taking into account the actual status inheritance of *U* status in each country without assuming them to be equal).

TABLE 16

PREDICTED MOBILITY PATTERN FOR BRITISH AND DANISH SAMPLES: STATUS INHERITANCE IN THE UPPER CATEGORY IN EACH SAMPLE IS TAKEN INTO ACCOUNT AND THE INTERACTIONS* THAT DO NOT INVOLVE THIS STATUS INHERITANCE IN BRITISH POPULATION ARE ASSUMED EQUAL TO THE CORRESPONDING INTERACTIONS IN DANISH POPULATION

Father's Status	British Subject's Status			Father's Status	Danish Subject's Status		
	U	*M*	*L*		*U*	*M*	*L*
U..........	588 0†	390 8	163 2	*U*..........	685 0†	284.2	113 8
M..........	354.2	715.4	440 3	*M*..........	226 8	346 6	204.7
L..........	108.8	322 8	413.5	*L*..........	88 2	198.2	243.5

* These interactions are between subject's status and father's status.

† These cells were blanked out when calculating the predicted mobility pattern for the cells that were not blanked out. The frequencies, which are given here in the cells that were blanked out, are the observed frequencies.

The value of 1.56 is obtained for the χ^2 goodness-of-fit statistic (with 3 degrees of freedom). Comparing this value (1.56) with the value of 4.10, which was obtained in the preceding paragraph, we see that the differences between the two countries (with respect to the interactions between subject's status and father's status) can be accounted for, to a rather large extent, by the difference in status inheritance of *U* status in these countries. In a later section, we shall see that a related difference between the two countries is even more pronounced.[51]

INTRINSIC STATUS INHERITANCE AND DISINHERITANCE

If the methods usually used to analyze social mobility tables (e.g., by calculating the usual mobility ratios) were applied to analyze tables 1 and 8, they would have left the impression that there was "status inheritance"

[51] See footnote 37.

in status category M. The index of immobility[52] for the M status category, which is based on the usual mobility ratio (i.e., it is the ratio of the observed frequency in cell (M,M) and the frequency expected under the assumption of perfect mobility), is greater than 1.00; namely, 1.16 and 1.29 for tables 1 and 8, respectively. In apparent agreement with this, the interaction pertaining to status inheritance (interaction $[M,M]$) is positive in both countries (see tables 7 and 10). But the mobility ratio and this particular interaction do not measure what they appear to measure; the magnitudes of the intrinsic status inheritance of the U and L statuses confound the meaning of this particular ratio and this interaction.[53] Because of this confounding, we introduced here the interactions pertaining to the intrinsic status inheritance of each status category, and we then found that it was negative for the M status category in both countries. Thus, there is actually an intrinsic status disinheritance (rather than inheritance) in the M status category of both countries.[54]

We noted above that the mobility ratio (and the corresponding index of immobility) did not measure what it appeared to measure, since it compared the observed frequency with an expected frequency that is affected by the relative magnitudes of the intrinsic status inheritance and disinheritance in the various status categories. This difficulty can be remedied by calculating a different set of "expected" frequencies by the following procedure: First, since the model of quasi-independence fit the data when the diagonal cells were blanked out, we use this model to calculate the "expected" frequencies in the cells that are not blanked out, and then from these "expected" frequencies (or, more directly, from the estimates of the parameters of the model from which the "expected" frequencies were calculated) we calculate the frequencies in the blanked cells that would make the pattern of "expected" frequencies conform to a pattern of independence (between the column and row classifications) in the entire cross-classification table. By a straightforward extension of the method I developed earlier (1965*b*), we obtain the "expected" frequencies in table 17.

[52] The terms "status immobility," "status inertia," "status stability," "status persistence," "status inheritance," "status association," which appear in the published literature, all refer to the same phenomenon; namely, the tendency for there to be a concentration of observations in the cells on the main diagonal (see, e.g., Rogoff 1953; Carlsson 1958).

[53] Since intrinsic status inheritance of the U and L status categories means that the observed frequencies in the cells (U,U) and (L,L) will be "too large" (in a certain specific sense), these larger frequencies will increase the column and row marginal totals pertaining to both the U and L status categories; and thus the size of the column and row marginals pertaining to the M status category will be decreased relative to the other status categories. With this relative decrease in the marginals pertaining to the M status category, we obtain a decrease in the expected frequency in the (M,M) cell (calculated under the assumption of perfect mobility); and thus the ratio of the observed to the expected frequency in the (M,M) cell is raised above 1.0. This should help to explain why the observed mobility ratio is greater than 1.0. The observed interaction (M,M) is positive for a similar kind of reason.

[54] See footnote 31.

By comparing the observed frequencies with the corresponding "expected" frequencies in table 17, we obtain a new set of "mobility ratios" which lead to quite different conclusions from the usual mobility ratios.[55] For example, confining our attention for the moment to the diagonal cells, these new ratios (which we shall call the "new indices of immobility" when they are calculated for the diagonal cells) are given in table 18. For both Britain and Denmark, the new index of immobility pertaining to status *M*

TABLE 17

PREDICTED MOBILITY PATTERNS FOR BRITISH AND DANISH SAMPLES: STATUS INHERITANCE (OR DISINHERITANCE) IN EACH STATUS CATEGORY IS TAKEN INTO ACCOUNT AND QUASI-INDEPENDENCE* IS ASSUMED

Father's Status	British Subject's Status			Father's Status	Danish Subject's Status		
	U	*M*	*L*		*U*	*M*	*L*
U..........	131.1†	390.2	163.8	*U*..........	127.2†	284.7	113.3
M..........	358 8	1052.9†	442 2	*M*..........	227 3	509.1†	202.7
L..........	109 2	324 8	136 4†	*L*..........	87.7	196.3	78.2†

* This quasi-independence is between subject's status and father's status.

† These cells were blanked out when calculating the predicted mobility pattern for the cells that were not blanked out. The frequencies, which are given here in the cells that were blanked out, are the frequencies that would make the predicted mobility pattern conform to a pattern of "perfect mobility" for the entire cross-classification table.

TABLE 18

NEW INDEX OF STATUS IMMOBILITY FOR EACH STATUS CATEGORY IN BRITISH AND DANISH SAMPLES, AND CORRESPONDING INDEX OF IMMOBILITY BASED ON USUAL MOBILITY RATIO

Status Category	British Sample		Danish Sample	
	New Index	Usual Index	New Index	Usual Index
U..............	4.48	1.71	5.39	1.51
M..............	0.68	1.16	0.68	1.29
L..............	3.01	1.67	3.15	1.97

[55] Although the usual mobility ratios are supposed to measure the degree of mobility in a way that is "independent," in a certain sense, of the effects of the column and row marginal distributions, we have noted that they do not do so in situations where the observed marginal distributions are themselves affected by other phenomena (e.g., by intrinsic status inheritance of *L* and *U* statuses). In these situations, the new mobility ratios presented here take into account (and adjust for) the effects of these phenomena as well as the effects of the column and row marginal distributions. The new mobility ratios are calculated by replacing the observed column and row marginals by "theoretical" column and row marginals that describe what the size of the marginals would have been in a hypothetical situation in which the effects of these phenomena are nil. The "theoretical" marginals are calculated (as in my article [1964*a*]) using only cell entries in the table that are not affected directly by the phenomena. We use a set of cells that exhibits quasi-independence between the column and row classifications.

is smaller than one, whereas the usual index is larger than one.[56] There are actually fewer individuals in the (M,M) cell of the cross-classification tables (tables 1 and 8) than would be "expected" in table 17, and more individuals in the (U,U) and (L,L) cells than would be "expected."

Since the sum of the "expected" frequencies in table 17 for the cells that had not been blanked out (i.e., the nondiagonal cells) is equal to the sum of the corresponding observed frequencies in those cells, we find that the sum of the frequencies in all the cells of this table will usually not be equal to the sum of the corresponding observed frequencies. Indeed, the relative difference between the totals (in all the cells) provides us with a measure of one aspect of the net amount of status "persistence" in the tables.[57] This measure tells us what proportion of the individuals in the observed sample would need to be added to the diagonal cells of table 17 in order to make the total of the frequencies in this table (with the added individuals) equal the observed sample size. Calculating this measure for the British and Danish samples, we obtain 0.11 and 0.24, respectively.

In addition to the usual calculation of the mobility ratios, various other measures, which are based upon a comparison of the observed frequencies with the usual expected frequencies (calculated under the assumption of perfect mobility), have been suggested by other writers.[58] Replacing the expected frequencies as usually calculated by the "expected" frequencies as calculated in table 17, we would now obtain a variety of new measures, analogous to those presented earlier, but capable of leading to entirely different conclusions (as was the case illustrated in table 18). We shall not go into these details here.

We shall now comment upon the relationship between the new index of immobility in table 18 and the interactions pertaining to intrinsic status inheritance which were introduced earlier in this article. Recall that the interaction pertaining to a given 2×2 subtable was calculated by taking the logarithm of the corresponding odds-ratio in the subtable, and that the interaction pertaining to intrinsic status inheritance of U status (in table 1) was obtained as the arithmetic average of the interactions in tables 1E and 1G. Thus, the interaction pertaining to intrinsic status inheritance of U status is equal to the logarithm of the geometric average

[56] In addition to this difference between the new index and the usual one, note also that the new index of immobility for the U status category is larger than for the L status category, but the usual index applied to the Danish data would have suggested the opposite to be the case.

[57] This relative difference is actually equal to the total difference between the observed and "expected" frequencies in the diagonal cells, divided by the total of all the observed frequencies in the cross-classification table. The difference between the observed and "expected" frequencies in the (U,U) cell, divided by the total of all the observed frequencies in the cross-classification table, we shall refer to as an index of status "persistence" of U status; and a similar definition would apply to the M status and the L status. This index is equal to 0.13, -0.10, and 0.08, for the U, M, and L status categories, respectively, in Britain; and 0.23, -0.07, and 0.07, respectively, in Denmark.

[58] See, e.g., Rogoff 1953; Glass 1954; Carlsson 1958; Svalastoga 1959.

of the odds-ratios in tables 1E and 1G.[59] If the model of quasi-perfect mobility (with the diagonal cells blanked out) were to fit the data perfectly, then this geometric average would equal the new index of immobility for *U* status as given in table 18.[60] A similar remark applies also to the *M* and *L* status categories. For the *U*, *M*, and *L* status categories, these geometric averages are 4.45, 0.68, and 3.00, respectively, for the British sample; and 5.42, 0.68, and 3.18, respectively, for the Danish sample. Note how similar these values are to the results obtained with the new index in table 18. (Since the interaction pertaining to intrinsic status inheritance of *M* status, as defined by formula [14], is the negative of the arithmetic average of the interactions in tables 1*B* and 1*C*, this interaction is equal to the logarithm of the geometric average of the reciprocals of the odds-ratios in tables 1*B* and 1*C*. Therefore, for the *M* status category, we actually use the geometric average of the reciprocals, rather than the geometric average itself, to obtain the numerical results presented above.)

From the results presented in tables 7 and 10, we see that all these values (i.e., the geometric averages corresponding to the interactions) differ from 1.00 in statistically significant ways. For the *U* and *L* status categories, these values are significantly larger than 1.00, and for the *M* status category, the values are significantly smaller than 1.00. Furthermore, we see that the values for the *U* status category are significantly larger than the corresponding values for the *L* status category, which in turn are significantly larger than the corresponding values for the *M* status category.

The interaction pertaining to intrinsic net status inheritance of all statuses, which was introduced earlier in this article, was the sum of the interactions pertaining to intrinsic status inheritance of *U*, *M*, and *L* statuses. Thus, this interaction is equal to the logarithm of the product of the three geometric averages referred to in the preceding paragraph. This product is equal to 9.13 and 11.65 for Britain and Denmark, respectively.[61] (Here too, for the *M* status category, we actually use the geometric average of the reciprocals, rather than the geometric average itself, in our calculations leading to the numerical results presented above.) From the results presented in tables 7 and 10, we see that these values are also significantly different from 1.00.

THE ANALYSIS OF CROSS-CLASSIFICATION TABLES OTHER THAN THE 3 × 3 TABLES

In the earlier sections of this paper, we used the 3 × 3 tables (tables 1 and 8) to illustrate the application of the various techniques of analysis pre-

[59] See also footnote 24.

[60] This relationship between the geometric average and the new index of immobility can be proved by calculating both of these quantities under the assumption that there is quasi-independence (i.e., quasi-perfect mobility), as defined in my article (1968), when the diagonal cells are blanked out.

[61] The calculation of this product leads also to the suggestion that the corresponding product be calculated for the values obtained with the new index of immobility given in

sented there. As we noted earlier, the general approach developed he could be applied more generally to cross-classification tables of any siz either square tables (e.g., 5 × 5 tables) or rectangular tables (e.g., 5 × tables). In the present section, we shall illustrate how some of these tec niques can be used with the larger tables.

Let us begin by considering the British and Danish data when five stat categories (rather than three) are used. We shall use the same five stat categories used earlier by Svalastoga (1959) for the comparison of th

TABLE 19

CROSS-CLASSIFICATION OF BRITISH AND DANISH MALE SAMPLES ACCORDING TO EACH SUBJECT'S STATUS CATEGORY AND HIS FATHER'S STATUS CATEGORY

FATHER'S STATUS	A	B	C	D	E
	British Subject's Status				
A	50	45	8	18	8
B	28	174	84	154	55
C	11	78	110	223	96
D	14	150	185	714	447
E	0	42	72	320	411
	Danish Subject's Status				
A	18	17	16	4	2
B	24	105	109	59	21
C	23	84	289	217	59
D	8	49	175	348	198
E	6	8	69	201	246

British and Danish data, and later used by Levine (1967) and Mostell (1968), but we shall reach somewhat different conclusions from tho presented in the earlier work. The data are given in table 19.[62] The stat categories *A*, *B*, and *C* in this table formed the *U* status category in tabl 1 and 8; and status categories *D* and *E* in this table were the same as *M* an *L*, respectively, in the earlier tables.

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table 18 for the *U*, *M*, and *L* status categories. This product would provide us with a index of net immobility.

[62] The entry in the (*E*,*A*) cell of the British table is 0 in the original data and here; b it was replaced by 3 in the tables used by Levine and Mosteller. Although there are sit ations in which a "smoothing" of the original data (or the replacement of a 0 value b say, ½) might be a reasonable procedure to adopt (see, e.g., Gart and Zweifel 196 Mosteller 1968), no justification is given for the replacement of a 0 value by 3 in the wo by Levine and Mosteller. The mobility patterns in the British and Danish data are act ally somewhat less similar when the original data are analyzed than when the 0 value replaced by 3; but of course, in a study aimed at comparing the mobility patterns in th the two sets of data, this increased similarity would not provide adequate justificatio for this particular replacement of the 0 value.

Applying to table 19 the same method as used to calculate the expected frequencies given in table 15, we obtain a value of 43.40 for the χ^2 goodness-of-fit statistic (with $4 \times 4 = 16$ degrees of freedom) comparing the observed frequencies in table 19 with the corresponding expected frequencies. Comparing this value (43.40) with the usual percentiles of the χ^2 distribution with 16 degrees of freedom,[63] we reject the null hypothesis that the interactions between subject's status and father's status were the same in the populations represented by the British and Danish samples.[64]

Recall that we found earlier that the χ^2 value, which was obtained when the two 3×3 tables (tables 1 and 8) were analyzed to see if the interactions were the same in the British and Danish studies, could be accounted for, to a rather large extent, by the difference in status inheritance of *U* status in these countries. Since the *U* status category has been divided into the three high status categories *A*, *B*, and *C*, in the tables presently under consideration, we shall now examine whether the interactions (between subject's status and father's status) in the British and Danish studies are quasi-homogeneous when the observed status inheritance among the three high status categories *A*, *B*, and *C*, in each country is taken into account.

Applying to table 19 the same method used to calculate the expected frequencies given in table 16, blanking out the nine cells in table 19 that correspond to the (*U*,*U*) cell in table 1, we obtain a χ^2 value of 11.69 for the χ^2 goodness-of-fit statistic (with $16 - 9 = 7$ degrees of freedom) comparing the observed frequencies in table 19 with the corresponding expected frequencies.[65] Comparing this value with the value of 43.40, which was obtained in the paragraph before the preceding one, we now see that the differences between the two social mobility tables (with respect to the interactions between subject's status and father's status) can be accounted for, to a rather large extent, by the difference between the tables in the status inheritance among the three high status categories.

The difference between the two χ^2 values ($43.40 - 11.69$) provides us with a value of 31.71, which can be treated as a χ^2 value (with $16 - 7 = 9$ degrees of freedom) for testing the null hypothesis that the British and Danish populations corresponding to table 19 are the same with respect to all interactions that are affected by the entries in the blanked out cells (i.e., the nine cells pertaining to status inheritance among the *A*, *B*, and *C* status categories), assuming that there is quasi-homogeneity with respect

[63] For example, the 95th percentile is 26.30. A question can be raised concerning the applicability of the usual large-sample χ^2 theory when one of the observed frequencies in the sample is zero; but we shall not pursue this point here.

[64] When considering the substantive meaning of this statistically significant difference, it should be noted that the British study included persons aged eighteen years and over, whereas the Danish study was limited to persons aged twenty-one years and over. For further details pertaining to the comparability of the British and Danish studies, see Svalastoga 1959.

[65] The 95th percentile of the χ^2 distribution with 7 degrees of freedom is 14.07.

to the interactions that are not affected by the entries in the blanked out cells. Comparing this value (31.71) with the usual percentiles of the χ^2 distribution with 9 degrees of freedom, we reject this null hypothesis.[66] By a comparison of the observed and expected frequencies in the test of homogeneity, or by some of the other methods described in the earlier sections we find that there is, generally speaking, more status inheritance among the status categories A, B, and C in the Danish study than in the British study, except that status inheritance within the status category A is more pronounced in the British study.

As we noted earlier, the 5 × 5 cross-classification tables considered above differ from the 3 × 3 tables considered earlier in that the A, B, and C status categories above had been combined to form the U status category earlier

TABLE 20

CROSS-CLASSIFICATION OF BRITISH MALE SAMPLE ACCORDING TO EACH SUBJECT'S STATUS CATEGORY

FATHER'S STATUS	SUBJECT'S STATUS				
	1	2	3	4	5
1	297	92	172	37	26
2	89	110	223	64	32
3	164	185	714	258	189
4	25	40	179	143	71
5	17	32	141	91	106

Note that the observed frequency in each of the A, B, or C status categories is much less than in the D or E status categories We shall now consider instead a 5 × 5 table (table 20) obtained by dividing the U status categories of the 3 × 3 table into two status categories (rather than three) and by dividing the L status category into two as well.[67] We shall use table 20 to illustrate the application (to tables other than the 3 × 3 tables) of some of the other techniques presented earlier in this article.

With the finer division into five status categories in table 20, we would expect that "status inheritance," as defined in my article (1965*b*), might affect not only the number of individuals who are in the same status category as their fathers but also the number of individuals who are in the

[66] The 95th percentile of the χ^2 distribution with 9 degrees of freedom is 16.92. Even if the χ^2 distribution with 16 degrees of freedom were used, in accordance with an analogous procedure based on one of the methods suggested earlier herein for the analysis of the corresponding Z^2 statistics, the null hypothesis would still be rejected.

[67] The British data are given in sufficient detail (and the sample is large enough) to make possible this particular 5 × 5 cross-classification. This could not be done with the Danish data. Even for the British data, it was not possible to divide the M status category into two subcategories. The particular 5 × 5 cross-classification (table 20) was considered earlier in my article (1965*b*).

status category immediately adjacent to their fathers.[68] Indeed, while the usual χ^2 test of the independence in the 5 × 5 table yields a χ^2 value of 780.47 (with 4 × 4 = 16 degrees of freedom), a χ^2 value of 1.31 is obtained (with 16 − 13 = 3 degrees of freedom) for testing the null hypothesis of quasi-independence when those individuals who differ from their fathers by at most one status category are blanked out.[69] Comparing the two χ^2 values (780.47 with 1.31), we see that the dependence between subject's status and father's status in table 20 can be accounted for, almost entirely, by status inheritance within status categories and status inheritance among adjacent status categories.

TABLE 21

NEW INDEX OF STATUS IMMOBILITY FOR EACH STATUS CATEGORY IN THE BRITISH SAMPLE CALCULATED BY TWO DIFFERENT METHODS

	New Index	
Status Category	Calculated by Method A*	Calculated by Method B†
1	14.26	12.00
2	2 00	2 62
3	0.53	0 68
4	3.13	3.15
5	5 38	4 35

NOTE.—The cross-classification of the British Sample analyzed in the present table was presented in table 20, in which the five status categories (1, 2, . . . , 5) were used.

* Method *A* takes into account status inheritance within status categories and status inheritance among adjacent status categories.

† Method *B* takes into account status inheritance among status categories 1 and 2, status inheritance among status categories 4 and 5, and status inheritance in status category 3.

In view of the fact that table 20 was obtained by a division of the *U* and *L* status categories of table 1 into status categories 1 and 2 and status categories 4 and 5, respectively, of table 20, we might also expect that it would only be necessary to take into account status inheritance among status categories 1 and 2, status inheritance among status categories 4 and 5, and status inheritance in status category 3. Indeed, a χ^2 value of 7.86 is obtained (with 16 − 9 = 7 degrees of freedom) for testing the null hypothesis of quasi-independence when those individuals in the four cells pertain-

[68] For the 5 × 5 tables in table 19, we would expect that "status inheritance" might affect the nine cell entries referred to earlier (pertaining to status inheritance among the *A*, *B*, and *C* status categories) and the two diagonal cells pertaining to status inheritance in the *D* status category and in the *E* status category.

[69] A total of thirteen cells were blanked out here: the five diagonal cells and the eight cells immediately adjacent to the diagonal cells.

ing to status inheritance among the status categories 1 and 2, the four cells pertaining to status inheritance among the status categories 4 and 5, and the diagonal cell pertaining to status inheritance in status category 3, are blanked out. Thus, we see that the data fit the model of quasi-independence quite well even when four of the thirteen cell entries, which were blanked out in the preceding paragraph, are not blanked out.

The numerical values obtained with the methods suggested earlier herein for calculating the new indices of immobility, and the various other measures introduced there, will depend upon which cells of the cross-classification table are blanked out. Thought must be given in each particular case to determining which cells should be blanked out. In the case considered above, the blanking out of the nine cells has the advantage that it blanks out fewer observations, while the blanking out of the thirteen cells has the advantage that it leads to a χ^2 value that is somewhat smaller in relative terms.[70] Table 21 compares the new indices of immobility, obtained by these two methods of blanking out. The results are quite similar. If an inappropriate set of cells had been blanked out in the 5 × 5 cross-classification (e.g., if only the diagonal cells had been blanked out in table 20), then quite different (and misleading) results would have been obtained [71]

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[70] In comparing the observed χ^2 values, the difference in their corresponding degrees of freedom can be taken into account by comparing the corresponding percentiles pertaining to the observed values.

[71] The inappropriateness of blanking out this particular set of cells was pointed out in my article (1965*b*). A similar point was also made by McFarland (1968).

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Measuring the Permeability of Occupational Structures: An Information-theoretic Approach[1]

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Methods deriving from information theory are proposed for th analysis of social mobility matrices. They permit us to give quantita tive answers to such questions as, "Given a man's social origin, hov much uncertainty is there about what his own social position will be? Other methods would undoubtedly be more appropriate wheneve social positions are measured on an interval scale, but the assumption they require are often implausible. The methods herein are designe for the more usual situation where positions are merely grouped i categories which may not even form an ordinal scale: nominal scal data are treated *as* nominal scale data. These methods are used t re-analyze several intergenerational occupational mobility matrice which appear in the literature and to make comparisons between suc matrices.

According to Svalastoga (1965a, p. [illegible]), the "permeability" of a society i the most important single clue to its system of social stratification. In statement apparently meant as a definition of "permeability" he writes "A social system is considered more or less permeable depending upon th ease of entrance to and exit from any position in the system" (Svalastoga 1965*a*, p. 39). Since we only have data on what people actually do, no what they could have done if they had been so inclined, "ease of entranc . . ." presumably refers to the former, not the latter.

This definition of permeability places it on the uncertainty-predictabilit dimension. If, in fact, it is easy to enter and leave the positions of the society the position in which a man ends up will be a matter involving a larg amount of uncertainty. On the other hand, if it is hard to enter and leav positions, a man's eventual position will be quite predictable.

Later in the same work, however, Svalastoga gives a different definitio of permeability as "the degree to which positions are filled without respec to social origin or other characteristics determined at birth" (p. 70). I the case of occupational structures, with which we are concerned, "socia origin" refers to the occupation of the father of the man in question.

This definition, unlike the earlier one, explicitly involves the dependenc of one's position on his social origin; there is a subtle difference which shoul not be overlooked. Consider the hypothetical mobility matrix shown a table 1. Clearly one's origin does not figure in determining his own occupa

[1] Paper presented at the annual meetings of the American Sociological Associatio Boston, August 1968. I wish to thank Lois Harder McFarland for programming th necessary calculations; Joel H. Levine for comments on an earlier version; and Ot Dudley Duncan for helpful discussions and making some of the data available in a co venient form.

tion, since the probabilities of each type of occupation are the same for everyone, regardless of origin; thus the society is extremely permeable according to the second definition. However, it is apparently quite difficult to enter any occupation not categorized as working class; thus it seems that this hypothetical society has low permeability according to the first definition.

Nevertheless, this second definition also relates to the dimension of uncertainty-predictability. However, it is not only the *amount* of uncertainty which is relevant here, but also the amount of *reduction* of uncertainty which occurs when one's social origin is learned. If positions are, in fact, filled without respect to social origin, then learning a man's social origin would be no help in predicting his own position. On the other hand, if social origin does figure in the way positions are filled, learning a man's origin

TABLE 1

HYPOTHETICAL MOBILITY MATRIX

	Own Occupation			
Origin	Upper	Middle	Working	Lower
Upper.......	02	.03	.90	05
Middle.....	.02	03	90	.05
Working	.02	03	90	.05
Lower........	.02	.03	.90	.05

NOTE.—The (i,j) entry is the conditional probability of having an occupation in category j, given that one's father has an occupation in category i.

should reduce the uncertainty about (i.e., increase the predictability of) his own occupation.

(In a personal communication Svalastoga writes that he meant the first definition to be more general than the interpretation it received above, and that he did not intend to suggest equivalence of the two definitions. "I rather felt that the first definition referring to ease of entry and exit was highly general; thus [it] might include operationalizations referring, e.g., to the relative openness of nations to migrants from abroad, and in general apply to all types of social systems, micro- and macro-. The second concept is, hence, seen as one of many specific interpretations of the first." In this light, the contrast made above is between two specific interpretations of a concept which is more general than either one of them.)

For his empirical work, Svalastoga sticks closely to the second definition, which involves the dependence of social status on social origin, or the predictability of the former from the latter. Since the absolute value of the correlation coefficient is an index of one type of predictability, namely predictability using a linear equation, Svalastoga (1965*a*, p. 40) concludes that "permeability is inversely related to the absolute value of the correlation

coefficient relating paternal and filial status." In a later paper (1965*b*) gives approximations of such correlations for nine European countries.[2]

Such a procedure, however, is beset with a number of problems whi originate in the very nature of the data to which it is applied. The correl tion coefficient is a parameter of the joint distribution of two (numerica random variables, and only through the use of questionable artifices can be applied to cross tabulations such as mobility matrices.

In order to calculate approximate values of correlation coefficien Svalastoga (1965*b*) is forced to assume that occupational status is unid mensional, and to arbitrarily assume the form of the underlying distrib tion of numerical social status values. For convenience he assumes that t form of the distribution is constant over time, and from country to cou try.[3] Then, assuming the categories are appropriately ordered from hi to low status, he can designate a range of numerical values for each cat gory. But he still has no way of assigning particular numerical values fro such a range to particular occupations within the category for which th range of values was designated. Therefore he arbitrarily treats the occup tions in a particular category as if each lay at the median of the range social status values designated for that category. This, in turn, makes t distribution of assigned values deviate considerably from the shape of t distribution assumed; in particular, it changes the standard deviation, matter Svalastoga seems to have overlooked in his calculations.[4]

Of course, even the assignment of a range of values to a particular cat gory, according to an assumed distribution of social status, requires th

[2] Actually, to our knowledge, Svalastoga never calculates values of $(1 - |r|)$, or a other such quantity inversely related to the absolute value of the correlation coefficie nor does he state a precise formula for calculating permeability from the correlati unless perhaps he intended "inversely related to" to mean "the reciprocal of." And another context, when working with dichotomous data, he measures permeability as "percent of the total group of manual origin who entered the elite, divided by the perc of the total population classified as elite" (Svalastoga 1965*a*, p. 117).

[3] At several points in his work, Svalastoga (1961; 1964, pp. 547–48; 1965*a*, pp. 12, 1965*b*, p. 175) either assumes that social status is lognormally distributed or gives th retical arguments of why this should be the case. The lognormal is a highly skew distribution defined as follows: If log X is normally distributed, then X is lognorma distributed. However, the numbers that he correlates are gotten from tables of the norn distribution. Thus if social status is, in fact, distributed lognormally, the values he cal lates are approximations of the correlations between the logarithm of father's status a the logarithm of son's status, rather than the correlations between father's status a son's status. Or stated differently, despite his theoretical arguments to the contrary, his actual calculations he in effect assumes that social status is normally distribut This discrepancy only becomes apparent in a mathematical appendix (1965*b*, pp. 18 82).

[4] This was pointed out to me by Otis Dudley Duncan, who recalculated Svalastog correlations to make sure he understood the precise procedure used. It is not entir clear whether the standard deviations of the assumed distributions or the standa deviations of the numbers actually assigned should be used in the denominator of t correlation coefficient. Svalastoga apparently used the former, although it is difficult be sure, since he rearranged the orders of some categories and collapsed some sets categories, as mentioned in the text.

the categories have a known rank order by status. But the data do not even have that property, and Svalastoga (1965*b*, p. 175) rearranges the categories in some cases and collapses sets of categories in others. His criterion for doing so is the so-called principle of social gravitation, which states that the amount of mobility between two categories decreases monotonically with the difference in their respective levels of social status. Thus he rearranges the data to make it fit this theory, which he then takes to signify that the resulting categories are rank ordered by status.

In summary, then, one who accepts Svalastoga's correlations must accept an extremely large set of questionable assumptions along with them. Some devotees of nonparametric statistics would probably turn to one or another of the "distribution-free" substitutes for the correlation coefficient (Goodman and Kruskal, 1954; 1959; 1963) to avoid the powerful assumptions required by Svalastoga's methods. But we will not do that.

The relevant questions are in terms of the predictability-uncertainty dimension: How much uncertainty exists about a person's position when his origin is unknown? And how much is this uncertainty reduced when we learn his origin? Thus the problem is one of measuring uncertainty where the data are in discrete categories. This problem has been solved by Shannon in his work on the theory of communication, more commonly called "information theory." His methods will be presented and discussed in the next section.

Other methods would undoubtedly be more appropriate when social status is measured on an interval scale (Duncan 1961; see also Blau and Duncan 1967, chap. 4).[5] But in the more usual situation, the occupations are merely classified into categories, with there being some question as to whether the categories even form an ordinal scale. It is for the latter type of data that these methods are particularly appropriate: they treat nominal scale data *as* nominal scale data, rather than attempting to convert them into interval scale data at the cost of making strong and questionable assumptions.

MEASURING UNCERTAINTY: SHANNON'S INFORMATION THEORY

Information theory was developed by Claude E. Shannon[6] in his 1948 papers, which are available in book form (Shannon and Weaver 1949). Our

[5] Even in the case of interval scaling of occupations, however, there may be some problems with using correlation (or regression) methods. For one thing, socioeconomic status is apparently not a single dimension (see Gordon 1958, chap. 7; Kahl and Davis 1955), so that no scale can do more than partly capture it. Second, the manner in which Duncan's (1961) scale is constructed gives it low discriminatory power at certain points on the scale. Third, as currently used in mobility studies, correlation and regression techniques detect only relationships which are linear in the occupational scale used, although these methods could be extended if found necessary.

[6] C. E. Shannon's information, used in this paper, is not to be confused with R. A. Fisher's information, used in the Cramer-Rao theorem of statistical estimation. (For the latter, see Rao 1965, pp. 268–71.)

formulation in this section largely follows that of Khinchin's papers, which are also available in book form (Khinchin 1957). Several textbooks on information theory are available (Ash 1965; Fano 1961; Goldman 1953). Other relevant books are Garner (1962) and Theil (1967), wherein information theory methods are applied to certain problems in psychology and economics, respectively.

We begin with a situation A, having K possible outcomes, denoted 1, 2, . . . , K, with probabilities $p_1, \ldots, p_K$, respectively, and define

$$H(A) = -\sum_{i=1}^{K} p_i \log p_i \,. \qquad (1)$$

If some p^1 is zero, the corresponding term is undefined ($0 \times -\infty$), so we use the convention of defining 0 log 0 as the limit, as p approaches 0 from above, of $p \log p$; this limit turns out to be 0. The base of logarithms is arbitrary, as will be shown below, so as a matter of convenience we use base 10 throughout.[7] The quantity H is variously called *information*, *entropy*, or simply *uncertainty*.[8]

The justification for defining uncertainty, and hence permeability, in this manner depends on the mathematical properties of the function H. First of all, H is either zero or positive, since each probability, being unity or less, has a zero or negative logarithm, and the negative sign in front changes each term to nonnegative. Also, H is zero in the case that some probability is 1 and all others are zero, the case where uncertainty is certainly minimum. More crucial, as we will see below, are the following properties:

1. The quantity H is maximum in the situation where the possible outcomes are equally likely, with probability $1/K$ each. The proof of this follows from the convexity of the function $p \log p$, sketched in figure 1. (Actually, we have plotted $-p \log p$, its reflection across the p axis.) If we denote $-p \log p$ by $f(p)$, then convexity means simply that for any set of different p values, whose average is denoted avg p, then $f(\text{avg } p) \geq \text{avg } f(p)$. An

[7] The reader will recall that the logarithm of a number is the power to which the base must be raised to yield that number. Thus $\log_2 (\frac{1}{8})$, the logarithm of $\frac{1}{8}$ to base 2, is -3, since $2^{-3} = 1/(2^3) = \frac{1}{8}$. Base 2 logarithms are used consistently in the area of communication in order to make the unit of information, called a "bit" (*b*inary dig*it*), equal to the amount for the simplest possible signal generating device, one with only two possible states each having probability $\frac{1}{2}$. There is no comparable reason for using base 2 logarithms in mobility research, and good reason not to do so: tables of base 2 logarithms are rare, while tables of common logarithms (base 10) and natural logarithms (base $e = 2.78$ approx.) are readily available. Base 10 logarithms also have the property that $\log (10^n p) = n + \log p$, which makes them somewhat more convenient than natural logarithms.

[8] The use of the term "information" for a quantity that measures uncertainty may seem confusing and deserves some explanation. The amount of information gained, in learning the outcome, is the amount by which the prior uncertainty is reduced. But learning the outcome reduces the uncertainty to zero, making the amount of information gained equal to the amount of prior uncertainty. Thus the same quantity measures both the uncertainty existing before the outcome is known and the information gained in learning the outcome.

example for two p values is shown in figure 1. A few rough calculations, remembering that the probabilities in any situation must sum to one, will convince the reader that this is always true. A proof is given in Khinchin (1957, p. 4). Once again H agrees with the intuitive notion of uncertainty, taking its largest value where each outcome has the same probability, where there is no basis for predicting any one outcome over the rest.

This maximum possible value of H can be calculated, and depends only on K, the number of possible outcomes. If each of the K probabilities is $1/K$, then $H = -K(1/K) \log (1/K) = -\log (1/K) = \log K$. In our case, K is the number of occupational categories.

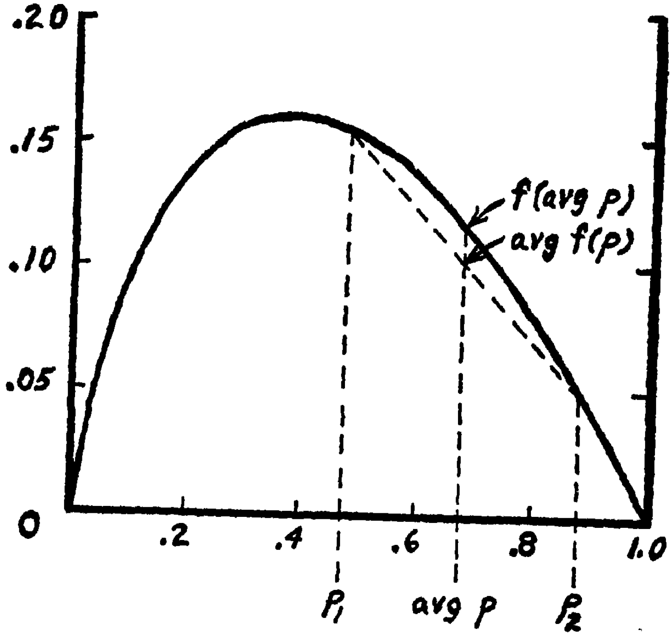


FIG. 1.—Graph of $f(p) = -p \log p$, using base 10 logarithms, with an illustration of the convexity of $(p \log p)$.

2. Writing down a $(K + 1)$st possible outcome which is fictitious, in the sense of having zero probability of occurring, would not make one feel any more or less certain about the actual outcome. Nor would the listing of such a fictitious occupational category in our case change the value of H, since the term added to the summation would be $-0 \log 0 = 0$.

One could also consider other aspects of a man besides his occupation; for example, his education, intelligence, ethnic background, or father's occupation. If one of these is conceived of as forming discrete categories (or arbitrarily partitioned into discrete categories) with known probabilities, this would lead to a matrix of joint probabilities of occupation and the other characteristic. Of course this would also give rise to two marginal distributions of probabilities for occupation and the other characteristic,

respectively, and two sets of conditional distributions: for occupation, given the other characteristic, and for the other characteristic, given occupation. We might want to determine the amount of uncertainty involved in any one of these distributions, whether joint, marginal, or conditional.

The measurement of uncertainty, as outlined above, is easily extended to the uncertainty of joint events. Consider a sequence of two situations, A and B, A having K possible outcomes, generically indexed by i, B having L possible outcomes, generically indexed by j, and denote the probability of joint occurrence by p_{ij}. Then there are KL different possible joint outcomes, so the uncertainty of the joint outcomes, from formula (1), is

$$H(AB) = -\sum_{i=1}^{K} \sum_{j=1}^{L} p_{ij} \log p_{ij} \,. \tag{2}$$

This is identical in form with formula (1), except that joint probabilities, being doubly indexed, require a double summation.

Let $p_{j/i}$ denote the conditional probability of outcome j in the second situation, given that outcome i occurs in the first; and let $p_{i\cdot}$ and $p_{\cdot j}$ denote the respective marginal probabilities. By the definition of conditional probability, we have $p_{ij} = p_{i\cdot} p_{\cdot j/i}$, and thus $\log p_{ij} = \log p_{i\cdot} + \log p_{j/i\cdot}$; substituting these into formula (2) gives

$$\begin{aligned} H(AB) &= -\Sigma\Sigma p_{i\cdot} p_{j/i}(\log p_{i\cdot} + \log p_{j/i}) \\ &= -\sum_{i=1}^{K} p_{i\cdot} \log p_{i\cdot} + \sum_{i=1}^{K} p_{i\cdot}\left[-\sum_{j=1}^{L} p_{j/i} \log p_{j/i}\right]. \end{aligned} \tag{3}$$

The quantity in square brackets in formula (3) is identical with formula (1), except that it involves conditional, rather than marginal probabilities. Thus we are led to define conditional uncertainty:

$$H(B/A = i) = -\sum_{j=1}^{L} p_{j/i} \log p_{j/i} \,. \tag{4}$$

Using this definition, formula (3) reduces to

$$H(AB) = H(A) + E\, H(B/A)\,, \tag{5}$$

where E is the expectation operator, denoting a weighted average. This is a third property of H that we wish to consider:

3. In words, formula (5) states that the uncertainty about the joint outcome of situations A and B equals the amount of uncertainty about the outcome of A plus the average amount of uncertainty which would still remain about the outcome of B if the the outcome of A were known.

In the case of B being occupation and A being some other characteristic, this reads: The joint uncertainty about a man's occupation and the other characteristic equals the amount of uncertainty about the other character-

istic plus the average amount of uncertainty which would still remain about his occupation if the other characteristic were known.[9]

In measuring uncertainty, the use of a quantity which involves logarithms may seem unnatural or unnecessary. But we have shown that H, as defined in formula (1), has several properties which agree with what one would intuitively mean by "uncertainty." Now, to complete the justification of the use of H to measure uncertainty, we use the uniqueness theorem which states that H is the only function satisfying three of these properties, in the sense that only the unit of measurement is arbitrary: H measures uncertainty on a ratio scale. The theorem is as follows:

Theorem (uniqueness): Let U be a continuous[10] function defined for any number of possible outcomes, and any set of probabilities. If U satisfies properties 1, 2, and 3, then $U = cH$, where c is a positive constant.

The proof, though not difficult, is several pages long, and will not be presented here. It is given in Khinchin (1957, pp. 9–13). Shannon used a slightly different set of requirements for a function to measure uncertainty, arriving at the same result—that H is unique up to a positive multiplicative scale factor (Shannon and Weaver 1949, pp. 48–50, 116–18).

We promised earlier to show that the base of the logarithms in formula (1) is arbitrary. Once we have the uniqueness theorem, this fact follows easily from the change of base theorem for logarithms: For any two bases, a and b, and any number N, $(\log_a N) = (\log_b N)(\log_a b)$. Thus calculating H using logarithms to base a is equivalent to calculating it using logarithms to base b, and multiplying the result by $\log_a b$, which may be included in the scale factor c of the uniqueness theorem.

PARTITIONING THE UNCERTAINTY IN A MOBILITY MATRIX

In this section we partition the joint uncertainty about a man's origin and destination into two components: uncertainty about his social origin and average uncertainty about his own occupation once his origin is known. Our interest is in the latter component, which is an average of conditional uncertainties, given various origins. A comparison of these various conditional uncertainties may be enlightening. Inequalities are derived, giving bounds within which the various components of uncertainty must lie (one such bound relates this work to previous work using the concept of "perfect mobility").

Consider a matrix P, with entries p_{ij}, the joint probability of origin occu-

[9] On the other hand, if conditioning were done on occupation rather than the other characteristic, equation (5) would read: The joint uncertainty about occupation and the other characteristic is the amount of uncertainty about occupation plus the average amount of uncertainty about the other characteristic which would still remain if occupation were known. Equation (5) is valid regardless of which way the conditioning is done.

[10] Continuity is required only in case some probabilities are irrational numbers. This need not concern us here.

pational category, i, and destination occupational category, j.[11] Equat (5) permits us to partition the joint uncertainty as follows:

$$H(AB) = H(A) + E\, H(B/A),$$

where $H(A)$ is the uncertainty about a person's category of origin (tal to be his father's occupational category at some specified time; e.g., wl the respondent was sixteen, or when the father was thirty, or in so specific year) and $E\, H(B/A)$ is the average amount of uncertainty ab a person's destination category (current occupation) when his category origin is known.

TABLE 2

ESTIMATES OF CONDITIONAL PROBABILITIES OF RESPONDENT'S OCCUPATION CATEGORY ("DESTINATION"), GIVEN HIS FATHER'S OCCUPATIONAL CATEGORY ("ORIGIN")*

	DESTINATION							
ORIGIN	1	2	3	4	5	6	7	TOTA
1......	*.388*	.147	.202	.062	.140	.047	.015	1.0(
2......	.107	*.267*	.227	.120	.207	.053	.020	1.0(
3......	.035	.101	*.188*	.191	.357	.067	.061	1.0(
4......	.021	.039	.112	*.212*	.430	.124	.062	1.0(
5......	.009	.024	.075	.123	*.473*	.171	.125	1.0(
6......	.000	.013	.041	087	.391	*.312*	.155	1.0(
7......	.000	.008	.036	.083	.364	.235	*.274*	1.0(

NOTE.—Numbers in this and following tables are rounded from computer output where calcula were done to several more decimal places; totals shown were rounded independently, so they may slightly from totals calculated from the rounded figures in the tables.

* From British mobility study (Glass and Hall, 1954).

The first term, $H(A)$, describes the uncertainty of the occupations of previous generation (but with highly unequal weighting)[12] and is not direct concern to us here. The second term is the one of interest to us consists of a weighted average of the various conditional uncertaint $H(B/A = i)$, when origin category, i, is known. One matter of interes to observe how $H(B/A = i)$ varies as a function of i; the extent to wh conditional uncertainty about destination is greater for some categorie origin than for others.

Table 2 gives conditional probabilities (or rather sample estima

[11] We use the neutral term "category" to avoid some of the connotations and ambi ties of the more common term, "class" (see Svalastoga 1965a, pp. 53–56; Gordon 1 p. 6; Pfautz and Duncan 1950; Cooley 1909, p. 209). We make no assumptions al "class consciousness," nor about the amount of interaction (if any) among membe a given occupational category. And, in particular, although the occupational categ may be ranked by prestige, the methods used do not require it.

[12] The weights are proportional to the number of sons in the current labor force that those with no sons do not enter at all, those with two sons receive double wei etc. Also, $H(A)$ does not describe a cohort of a generation ago, but rather a group of

thereof) from the Glass and Hall (1954) study of social mobility in England. Table 3 gives the uncertainty transformation ($-p \log p$) of these conditional probabilities, so that the sum of the entries in row i of table 3 is $-\Sigma_j p_{j/i} \log p_{j/i} = H(B/A = i)$, the conditional uncertainty about destination occupational category, given that origin category was i.

Thus far the numbers $i = 1, 2, 3, 4, 5, 6, 7$, denoting occupational categories, have in no way affected the calculation of uncertainty, either through their magnitudes or through their ranks. They merely provided a convenient index of summation, and addition is commutative—the sum of a set of numbers is unaffected by the order in which they are added. However, in the Glass and Hall data these numbers *are* meaningful: they rank the occupational categories more or less by socioeconomic status, from highest (1) to lowest (7). Notice in table 3 that the conditional uncertainty

TABLE 3

UNCERTAINTY TRANSFORMATION ($-p \log p$) OF THE CONDITIONAL PROBABILITIES IN TABLE 2, AND THE CONDITIONAL UNCERTAINTY ABOUT DESTINATION, GIVEN EACH OF THE POSSIBLE ORIGINS

Origin (i)	Destination 1	2	3	4	5	6	7	Total [$H(B/A=i)$]
1	.16	.12	.14	07	12	06	03	.71
2	10	.15	.15	11	14	07	.03	.76
3	.05	.10	.14	14	.16	08	.07	74
4	.04	05	.11	14	16	.11	.07	68
5	.02	.04	.08	.11	.15	13	11	.65
6	00	02	06	.09	16	.16	.13	.62
7	00	02	05	.09	.16	.15	.15	62

is greatest (.76) for those originating in the second highest SES category, and decreases to .62 for those originating in the lowest SES category.

The highest occupational category is an exception to this otherwise regular decrease in conditional uncertainty with decrease in socioeconomic status. This category is composed of professionals and high administrators (Glass and Hall, 1954). Table 2 shows the source of this exception: Professionals and high administrators have an exceptionally large amount of occupational inheritance ($p_{1/1} = .388$). We conclude that, except for the highest category which is relatively more successful in passing on its status, the English occupational structure was more permeable for those whose origins were higher—precisely those who might prefer less permeability.

This, incidentally, is something we would not have learned using correla-

drawn from several cohorts. In fact, if both a man and his son are working their family will be represented four times, covering three generations: the son, the father twice (once as a repondent and once as the father of a respondent), and the grandfather (as the father of the father, who is a respondent). For further discussion see Duncan (1966, pp. 54–63).

tion or regression techniques. The closest we could come, using the various linear models, would be to estimate the correlation or regression coefficients, for son's occupation on father's occupation, in each of a number of broad occupational categories (for fathers). To our knowledge, this has never been done. Blau and Duncan (1967, pp. 147–52) use a technique based on the analysis of covariance model, but the categories they use are from a different variable rather than from father's occupation.

Table 4 gives some further results. The marginal uncertainty about occupations of fathers of respondents is $H(A) = .71$, only differing slightly from the marginal uncertainty for the respondents themselves, $H(B) = .72$. However, if any interpretation is to be made of this, we should recall that the fathers of respondents do not properly represent a cohort of a generation ago. (The reader may wish to review footnote 11.) For this reason it is

TABLE 4

CALCULATIONS FOR MARGINAL UNCERTAINTY ABOUT ORIGIN, MARGINAL UNCERTAINTY ABOUT DESTINATION, AND AVERAGE CONDITIONAL UNCERTAINTY, FOR BRITISH MOBILITY DATA

	ORIGIN		DESTINATION		
CATEGORY (i or j)	$p_{i\cdot}$	$-p_{i\cdot} \log p_{i\cdot}$	$p_{\cdot j}$	$-p_{\cdot j} \log p_{\cdot j}$	$p_{i\cdot}H(B/A=i)$
1......	037	.05	.029	05	.03
2......	043	.06	.045	.06	.03
3 . .	099	10	094	10	07
4 .	148	12	131	12	10
5 . . .	432	16	409	16	28
6 . ..	131	12	170	.13	08
7 .. .	.111	11	121	11	07
Total.	1.000	.71 [$H(A)$]	1.000	.72 [$H(B)$]	66 [$E\ H(B/A)$]

better to think of the origin distribution as the distribution of social origins of the respondents, rather than thinking of it as the distribution of social statuses of the preceding generation. Using this interpretation, the marginal uncertainty about current social statuses of the respondents is practically identical with the marginal uncertainty about their social origins; but with the data given above we are unable to compare their uncertainty with that of a representative sample of workers from a generation ago.

Learning the occupation of one's father reduces the uncertainty about his own occupation, on the average, from $H(B) = .72$ to $E\ H(B/A) = .66$, an average reduction of .06. However, for some origin categories it is reduced even more (to .62 if his father is in category 7) and for other origin categories the uncertainty actually increases on learning the father's occupation (to .76 if the father is in category 2).

Is .76 a large amount of conditional uncertainty, or relatively little? To answer questions of this type we need to derive further properties of H.

The marginal probability for destination category j, $p_{\cdot j} = \Sigma_i p_{j/i} p_{i\cdot}$, is a weighted average of the conditional destination probabilities, $p_{j/i}$, using the marginal origin probabilities, $p_{i\cdot}$, as weights. Thus, again denoting $-p \log p$ by $f(p)$, we have $f(p_{\cdot j}) = f(\Sigma_i p_{j/i} p_{i\cdot} \geq \Sigma_i p_{i\cdot} f(p_{j/i})$ by the convexity of $p \log p$. Summing this inequality over j, we get the result

$$H(B) \geq E\, H(B/A)\,. \tag{7}$$

In words: on the average, learning the outcome of A can only decrease the uncertainty about the outcome of B. (This property was not needed in proving the uniqueness of H, but once again H agrees with the intuitive concept of uncertainty.) Note that this does *not* say anything about particular cases; only the average. We already observed cases where learning the father's occupational category actually increases the amount of uncertainty about the son's occupational category.

We already know that $H(B) \leq \log K$, where K is the number of occupational categories. Combining this with inequality (7) we have

$$E\, H(B/A) \leq H(B) \leq \log K\,. \tag{8}$$

For conditional uncertainty we have the inequality

$$H(B/A = i) \leq \log K\,, \tag{9}$$

which is true for any H, whether conditional or not.

The conditional uncertainty has little further restriction. The reason is that, for a category in which few men originate (i.e., $p_{i\cdot}$ small), the conditional probabilities, $p_{j/i}$, can be practically anything without exceeding the destination marginal restrictions, $0 \leq p_{ij} \leq p_{\cdot j}$, which (recalling that $p_{ij} = p_{i\cdot} p_{j/i}$) is equivalent to $0 \leq p_{j/i} \leq p_{\cdot j}/p_{i\cdot}$. The quantity on the right may be quite large (possible over 1.0) if the $p_{i\cdot}$ in the denominator is sufficiently small.[18]

Pursuing another line of reasoning, it is a short step from inequality (8) to relate this approach to previous work (Glass 1954; Rogoff 1953; also see Goodman 1965) which uses the concept of perfect mobility—stochastic independence between occupations of father and son. In the process we will show as well that the average conditional uncertainty, $E\, H(B/A)$, does relate to the father-son correlation in approximately the manner described by Svalastoga (assuming a numerical SES scale is available to be correlated).

From inequality (8) we have that $E\, H(B/A)$ is never greater than $H(B)$. But in the case of perfect mobility, we have stochastic independence, so that $p_{j/i} = p_{\cdot j}$. Thus from equation (4), in the case of independence $H(B/A = i) = H(B)$ for each i. Then multiplying both sides by $p_{i\cdot}$ and summing over i, we get

$$E\, H(B/A) = H(B) \qquad \text{(under independence)}\,. \tag{10}$$

[18] Of course the $p_{j/i}$, being probabilities, have the restrictions of being between 0 and 1, and summing to 1 (when summed over j). But this places no further restriction on the conditional uncertainty, $H(B/A = i)$.

In words: the average conditional uncertainty takes on its maximum possible value when father and son are stochastically independent—in which case the father-son correlation is zero. On the other hand, we already know that when the correlation is 1 or -1 the average conditional uncertainty is 0. This corresponds approximately to the statement quoted earlier: "Permeability is inversely related to the absolute value of the correlation coefficient relating paternal and filial status" (Svalastoga 1965*a*, p. 40). The difference is that the correlation may be zero without statistical independence, in which case there is still some predictability. Correlation detects only linear relationships, while the method used here detects other deviations from stochastic independence as well.

In table 4 we saw the marginal uncertainty $H(B) = .72$, while the average conditional uncertainty, when father's occupational category is known, was $E\ H(B/A) = .66$, an amount .06 less than it would be in the case of perfect mobility with the same fixed marginal distribution of sons. Of course, from inequality (8) it could never be greater than under independence, while subject to the fixed marginal distribution. However, it could be as high as $\log 7 = .845$ if the marginal distribution of sons were free to vary.

CATEGORY BOUNDARIES AND RELATED MATTERS

Thus far we have taken the occupational categories to be fixed and given. The time has come to face the question squarely: In some cases the categories may be at the option of the investigator, and furthermore, the amount of uncertainty measured will depend on the way in which the categories are constructed.

First, the possible values of the uncertainty depend on the number of categories, since it is always between 0 and $\log K$, inclusive, and could conceivably take on any value in this range. This problem is minor, however. We could simply divide by $\log K$ (including $1/\log K$ in the arbitrary scale factor), getting an index that will vary between 0 and 1 as long as the number of categories used, K, is always the same.

Much more serious is the fact that the value depends on where the category boundaries are drawn. Of course, in this respect, any other technique (including correlation and regression) faces the same or a similar problem. In this section we will investigate the seriousness of the problem.

Suppose that we were to subdivide a single category into two categories (assuming we had the necessary data for such a finer classification), creating $K + 1$ occupational categories from the former K categories. For concreteness, suppose the category is divided in such a manner that the probability, p, of the original category is divided into the two probabilities, ap and $(1 - a)p$. Then the uncertainty contributed by all other categories would be unchanged, while the term $-p \log p$ would be replaced by the two terms $-ap \log (ap) - (1 - a)p \log (p - ap)$. This can be rewritten as $-p \log p + p\,[-a \log a - (1 - a) \log (1 - a)]$, by expanding and collecting terms. Thus, if H is the uncertainty of the original scheme with K cate-

gories, and H' is the uncertainty of the new scheme with $K + 1$ categories,

$$H' = H + p[-a \log a - (1 - a) \log (1 - a)] . \qquad (11)$$

The two terms in square brackets are simply the uncertainty transformations of the proportions into which the original category was split, a and $(1 - a)$. Hence they can be evaluated using the same computational procedure. The bracketed quantity is evaluated, for certain values of a, in table 5. Dividing a category into two equal categories will increase H by 30 percent of the original probability of that category; dividing it unequally

TABLE 5

EFFECT ON H OF DIVIDING ONE OF THE CATEGORIES INTO PROPORTIONS a AND $(1 - a)$ FOR SELECTED VALUES OF a

a	$-a \log a$	$-(1-a) \log (1-a)$	Sum
5	15	.15	30
.4	16	.13	.29
3	16	11	.27
2	.14	08	22
.1	.10	.04	14

NOTE.—Column headed "Sum" gives the value of the quantity in square brackets in equation (11).

TABLE 6

EFFECT ON THE MAXIMUM POSSIBLE VALUE OF H, OF EXPANDING K CATEGORIES INTO $(K + 1)$ CATEGORIES, FOR SELECTED VALUES OF K

K	$(K+1)/K$	$[\log (K+1)/K]$	$\log K$	Proportional Increase
5.	1 2	0792	6990	.115
10.	1 1	0414	1 0000	.041
50.	1.05	.0212	1.6990	.013
100.	1 01	0043	2.0000	.002

will give a smaller increase in H. Thus from equation (11) and table 5, if the original category is small (p small) dividing it further will have little effect on H. But subdividing a category which is originally large may have a substantial effect.

Creating an additional category, however, also increases the maximum possible value of H from $\log K$ to $\log (K + 1)$, an increase of $\log [(K + 1)/K]$. The proportional amount of increase, for certain value of K, is given in table 6. The conclusion seems to be that, if the categorization is relatively fine, the exact category boundaries are not too important, but that with only a few categories the exact location of category boundaries may make a sizable difference in the value of H.

COMPARING MOBILITY MATRICES

The problems with Svalastoga's correlation coefficients were discussed above in some detail. Now we have occasion to point out one positive aspect of his approach: Correlation methods are widely known and widely used, so every quantitatively oriented social scientist knows that $r = .4$ means a fairly healthy relationship, but far from perfect dependence. On the other hand, since information theory methods are not widely known among sociologists, it is much less meaningful to report that $E\ H(B/A) = .66$; it would probably be more meaningful if we could say that the average conditional uncertainty is greater (or less) in England than in the United States, or that the average conditional uncertainty has increased (or decreased) in the United States during recent decades. Thus we get into the problem of making comparisons. There are at least three distinct types of comparisons one might wish to make:

1. Comparison of mobility matrices for a given society at two points in time. This problem has generated considerable interest, and a sizable literature (see Duncan 1965, and earlier references cited there). The particular question on which much of the discussion has focused is whether the American stratification structure is becoming more rigid.
2. Comparison of mobility matrices for two subgroups of a given society at the same point in time. Obvious candidates for such a comparison would be mobility matrices for American Negroes and American whites (Duncan 1968), which should be of considerable interest with the current focus on related problems.
3. Comparison of mobility matrices for two different societies. This problem, as well, has generated considerable interest and a sizable literature. This type of comparison is considerably more problematic than the other two, and will be discussed more thoroughly below.

In making comparisons, a crucial consideration is what is to be compared with what. There seem to be several conflicting opinions. Svalastoga's criterion seems to be that persons with the same social status should be compared, whether or not they are employed in similar kinds of occupations. In contrast, Duncan (1966) paired occupations in two different countries on the basis of similar job titles. Furthermore, some authors (Svalastoga 1965*b*; Levine 1967; Mosteller 1968) would require that the marginal distributions be standardized somehow in order to effect comparability, although they disagree on the precise manipulation of the marginals required to do so.

There is good evidence (Hodge, Siegel, and Rossi 1966) that the prestige of occupations in the United States is relatively constant over time, so that the first two criteria (same social status versus same type of work) do not conflict to any great extent in comparisons made over time in the United States. Thus the methods described above could be applied to such comparisons, with each category consisting of the same occupations at both points in time. And most authorities (all but those who worry about un-

equal marginals) would agree that two mobility matrices constructed in this manner are, in fact, comparable.

In comparisons between two subgroups of the same society, such as U.S. Negroes and U.S. whites, the problems again appear to be minimal. It seems clear that the proper person with whom to compare a Negro doctor is a white doctor; the proper person with whom to compare a Negro clerk is a white clerk, etc. Thus these methods could be applied to such comparisons, with the same occupational categories used for both subgroups.

The situation for international comparisons is not so clearcut. It is not nearly so apparent that a *Technische Angestellte*, say, in Geiger's (1951) study of Denmark, either does the same kind of work or occupies the same rank in his country's social structure that a "skilled worker" does in the United States (cf. Duncan 1966, p. 79). Translation of job titles, like other words, can introduce unintended changes in meaning (Marsh 1967, pp. 271–80). And international comparisons of prestige of occupations do not yield correlations as high as those between various times in the United States (Hodge, Treiman, and Rossi 1966; for an earlier study see Inkeles and Rossi 1956). Thus both those who would pair occupations by type of work done and those who would pair them by prestige have some cause for caution in making international comparisons. And those who require some type of standardization of the marginals have their own problems as well.

As mentioned above, the problem of international comparisons has generated a fair amount of controversy in the literature. American folklore (see Barber 1957, p. 469) has held that the United States is the land of opportunity, and Europe is not. Lipset and Bendix (1959), however, conclude that no such difference exists—that the mobility matrices for various industrial countries are quite similar. Several authors disagree. Matras (1960, p. 166), assuming social mobility to be a Markov chain, noted that there are important differences in the implied stable distributions for different countries. Miller (1960) also found differences. Duncan (1966, pp. 54–63; 77–83) rejected Matras's Markov chain assumption as fallacious, but reached similar conclusions by other methods. But Svalastoga (1965*b*), using a different criterion of comparability, concluded that the correlation between father's occupation and son's occupation is nearly invariant from country to country. And Levine (1967; or see Mosteller 1968), after manipulating marginals quite differently than Svalastoga had done, reached the same conclusion.

With appropriate misgivings about entering such a murky area, we too will make some comparisons. Table 7 shows the results of an uncertainty analysis for U.S. data, along with the British results already discussed. The occupational categories for the United States are ranked by prestige; more precisely, they are formed from intervals on the Duncan (1961) socioeconomic index. It is interesting to observe a repetition of a pattern observed earlier in the British data: low conditional uncertainty for those originating in the very highest category; but otherwise the higher the prestige, the higher the uncertainty. This pattern is not universal, however;

analysis of data from Italy (Lopreato 1965) and Yugoslavia (Milic 1965) reveals no such pattern.

It would be nice to be able to say that the American society is more (or less) open than the British; in fact, table 7 shows that on the average there is more uncertainty about where an American will end up, given his father's occupational category, than the corresponding uncertainty for a British respondent (.7077 for United States; .6635 for British). But such a statement would not be correct unless qualified by the assumption that the categories used in the two studies were comparable. And that assumption is questionable. The British categories are by occupational types: professional and high administrative, managerial and executive, etc. The American categories, in contrast, are formed from intervals on the Duncan socioeconomic scale, on which categories by occupational type overlap considerably (Blau and Duncan 1967, pp. 121–24). Thus it is questionable whether the categories used in the two studies are, in fact, comparable.

TABLE 7

ANALYSIS OF THE UNCERTAINTY IN A MOBILITY MATRIX FOR THE U.S., SHOWN WITH CORRESPONDING RESULTS FROM THE BRITISH MOBILITY STUDY DISCUSSED EARLIER

Uncertainty Component	England	U.S.A.
Conditional:		
1	.7065	.7782
2	.7567	.8118
3	.7376	.7566
4	.6839	.7590
5	.6518	.7206
6	.6173	.6845
7	.6197	.6787
Average	.6635	.7077
Marginal:		
Origin	.7125	.6440
Destination	.7192	.7450
Average reduction when origin is learned	.0557	.0373

NOTE.—Source for U.S.: unpublished table from the study "Occupational Change in a Generation," kindly provided by Otis Dudley Duncan. The categories used were formed from intervals on the Duncan SES index, rather than by grouping similar occupations as had been done in the mobility tables published from the same study in Blau and Duncan 1967.

One could attempt to achieve comparability by taking the seventeen-category mobility table from the same study (Blau and Duncan 1967), and

collapsing it into a seven-category table, equating, insofar as possible, the occupations included in each category with the occupations included in the corresponding British category. Of course, in doing so, one would lose the ranking by socioeconomic status and end up with a table that, like the British table, is only approximately ranked by status. Rather than doing so, however, we will turn to another set of mobility tables, in which comparable categories have been constructed already.

Lipset and Bendix (1959, p. 31) presented data from the Rogoff (1953) study in Indianapolis and Geiger's (1951) study in Aarhus, Denmark, each collapsed into a 4 × 4 mobility table. On the basis of visual inspection of these tables, they wrote, "It is clear that there is no substantial difference in the patterns of social mobility in Aarhus and Indianapolis" (Lipset and Bendix 1959, p. 31).

Duncan criticized their method, though he did not address their general conclusion that "the overall pattern of social mobility appears to be much the same in the industrial societies of various Western countries" (Lipset and Bendix 1959, p. 13).

Duncan's (1966, pp. 77–83) criticisms were basically the following: (*a*) The two tables are not comparable because of age differences in the samples, since Geiger's data came from a local census while Rogoff's data came from marriage licenses, hence predominantly from young men; (*b*) Even if that problem were overcome, 4 × 4 tables are not sufficiently detailed to display real differences which might exist; and (*c*) Lipset and Bendix had excluded Negroes from their Indianapolis table.

Duncan then proceeded to construct two mobility tables which would be more comparable (Duncan 1966, table 8). He took only the younger men from Geiger's data; constructed seven occupational categories for each city, placing similar occupational titles in the same category for the two cities (the job titles for Aarhus were in German); and included the Negro data in the Indianapolis table.

One might still question the comparability of the two mobility tables. For example, it might be argued that those who marry are more (or less) mobile than a representative sample; or that some of Duncan's equations of occupational titles were inappropriate; or that these equations should have been made on the basis of occupational prestige in the respective countries, rather than on the type of work done; or that the marginals should have been standardized in some way or other, etc. However, we will not do so, feeling that no comparison of this nature is completely immune to criticism. Rather, we will tentatively accept the assumption of comparability and proceed to compare the resulting mobility tables in terms of the amounts of uncertainty involved in their respective occupational structures.

The results of this comparison are shown in table 8. The various conditional uncertainties show some interesting results, even though the average conditional uncertainties are nearly identical. For those originating in categories 1 through 4, the white-collar occupations, the conditional uncertainties differ little in the two cities. But for those of skilled-worker origin, from category 5, Indianapolis has had more uncertainty, a difference of

.6534 − .6086 = .0448. This is an important difference, since this origin category accounts for about one-fourth of the respondents in each city. But for those originating in category 6, semi- and unskilled workers, and category 7, farmers, Aarhus involves more uncertainty, the differences being .6032 − .5282 = .0750 and .7511 − .6401 = .1110, respectively. Again, these categories are substantial, the former accounting for the origin of about 30 percent of the men in each city and the latter accounting for 10 percent–16 percent.

TABLE 8

ANALYSIS OF THE UNCERTAINTY IN MOBILITY MATRICES FOR INDIANAPOLIS* AND AARHUS, DENMARK† AS MODIFIED‡ TO MAKE THE TWO STUDIES COMPARABLE

Uncertainty Component	Indianapolis	Aarhus
Conditional:		
1	.7324	.7519
2	.7702	7434
3	.7477	.7515
4	.7503	.7381
5	.6534	.6086
6	.5282	6032
7	.6401	.7511
Average	.6416	.6660
Marginal:		
Origin	.7479	7016
Destination	.6833	.7015
Average reduction when origin is learned	.0417	0355

* Rogoff 1953. † Geiger 1951. ‡ Duncan 1966.

At this point we might stop to emphasize just what is being measured here. To someone whose father had a low status occupation, uncertainty about his own occupation means the possibility of being able to escape his background. And when someone originating in a low status occupation does escape his background, that usually means an increase in status from that of his father. Conversely, uncertainty about the destination of a man originating in a high status occupation usually means the undesirable (to him, at least) possibility of losing his birthright, and dropping to a lower status.

Here we found no substantial difference between Indianapolis and Aarhus for those originating in the high status occupations. But in the case of persons originating in the lower status occupations, there are differences worth noting, and which, incidentally, would be missed in the type of analysis that would reduce an entire mobility table to a single number, such as a correlation coefficient.

An index of the extent to which the respondent's own status depends on that of his father is given by the difference between the uncertainty in the marginal distribution of destinations and the average conditional uncertainty, that is, the amount by which uncertainty is reduced, on the average, when the occupation of the respondent's father is learned. Here again, the two cities are nearly identical.

Thus, we have found what one might expect to find in many such comparisons: A gross comparison, such as average conditional uncertainty, or average reduction in uncertainty when origin is learned, reveals little difference. But a finer analysis, such as the conditional uncertainty for each of a number of origin categories, reveals differences worth noting but which essentially cancel each other out in a gross analysis.

CONCLUSION

The methods used in this paper treat category data as category data, and thus avoid some of the powerful assumptions required for certain other methods, such as correlation. At the same time, they provide a finer analysis of a mobility matrix, revealing aspects of mobility which would be masked by more gross methods.

In concluding, we would like to note that these methods can be extended further, to the analysis of multivariate uncertainty. Thus one could consider the uncertainty involved in a cross-classification of occupation by father's occupation by educational level by race, for example. But that is a topic for another paper.

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Perceptions and Expectations of the Legislature and Support for It[1]

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In this study, based on a random household probability sample of 1,001 Iowa adults, the basic hypothesis is that congruence between perceptions and expectations about the legislature leads to high support for the legislature, and incongruence between perceptions and expectations leads to low support for the legislature. Data from the Iowa sample provide tentative confirmation of this hypothesis. Congruent and incongruent groups on each of ten factors were compared on their levels of legislative support. For each factor, the congruent group had a higher mean support score than did the incongruent group, although in only five cases was this difference statistically significant. The results do suggest that support for the political system, or some subsystem of it, is dependent to some extent upon congruencies in the mass public between expectations and perceptions of the system.

This report is a detailed analysis of images of political authority structures which emerge from theoretical concerns of Talcott Parsons and David Easton. Neither of them, however, directly suggested the particular hypothesis our analysis tests. While we have generally followed Easton's nomenclature in establishing the theoretical context of our investigation, sociologists will find that our analysis can as easily be couched in Parsonian terms. In brief, this investigation can be located in Parsons's paradigm of the societal interchange system within the interchange between the goal-attainment subsystem and the integrative subsystem. More specifically, we are dealing with interchanges between legislative collectivities and the public. Our analysis focuses explicitly upon what Parsons has called "generalized support" (1960, pp. 170–98; 1966, pp. 71–112; 1967, pp. 223–63).

If we conceive of a legislative institution as a part of a legislative system, in Easton's (1963, pp. 153–340) terms, we can see that most of the available

[1] This research was supported by grants and other research assistance from the National Science Foundation, the Social Science Research Council, the Research Department of the *Des Moines Register and Tribune*, the University of Iowa Graduate College and Computer Center, and the Laboratory for Political Research, Department of Political Science, University of Iowa. We are especially indebted to Glenn Roberts, Director of the Research Department and the Iowa Poll of the *Des Moines Register and Tribune* and his staff, for indispensable help in conducting our survey, and to Ted Hebert of the Laboratory for Political Research for his management of the coding of the survey data.

analyses of interactions between legislative systems and their environments have been in terms of *demands*. Thus, a great deal of the work on legislative politics has focused on constituency or party pressures, interest-group demands, or executive control. Very little research has focused upon citizen *support* of the legislature as a political institution (Jewell and Patterson 1966, pp. 339–57).

Our analysis of citizens' legislative support is based on a number of assumptions. First, we assume that the persistence and maintenance of legislative systems is heavily dependent on some adequate level of public support. We have found very little encouragement in research findings for imputations of high levels of citizen knowledge, concern, choice capability, or party issue awareness from "demand-input models" of mass public-legislature relations (Wahlke 1967). Thus we are inclined to think that it is now appropriate to think of legislative representation from the perspective of support as well as of demands.

Second, we assume that meaningful support for a legislature is not likely to flow in the general population from specific policy output. Rather it comes from diffuse predispositions in the mass public to (*a*) commitment to the legislature as a representative institution and (*b*) to compliance with its enactments. As a result, our research has focused on public attitudes toward the legislature as such, and not upon popular support for particular policy alternatives or specific legislation.

Finally, we have assumed that (*a*) generalized predispositions in the mass public to support the legislature as an institution can be measured by using standard attitude assessment techniques, and that (*b*) citizens will differ in their relative legislative support.[2] The field research which sought to operationalize citizens' legislative support and a host of other variables thought to be related to support was conducted in Iowa in November 1966. A household probability sample of 1,001 adults, representing the population of the state, was interviewed by professional staff under the auspices of the Iowa Laboratory for Political Research. Seven attitudinal statements about the legislature were used to measure support (to be discussed in detail later), and, by combining these items, respondents were scored in terms of their relative support for the legislature.

The basic hypothesis to be dealt with in this paper is that *legislative support in the mass public is a function of congruencies between perceptions of the legislature and expectations about it.* We expect high levels of legislative support from citizens whose feelings about what the legislature is like come close to their expectations of it. And, low levels of legislative support should be exhibited by those for whom there are wide gaps between their perceptions of the legislature and what they expect of it. Theoretically, a severe crisis of support should occur for legislative systems in which there is a very wide gap between what citizens expect it to be like and how they actually perceive it to be operating. Wide gaps in civic perception-expectation dif-

[2] For a report from this project which identifies the degrees of legislative support in different social and political strata, see G. R. Boynton, Samuel C. Patterson, and Ronald D. Hedlund (1968).

ferentials of this sort for substantial proportions of the population presumably contribute heavily to political reforms or, ultimately, to revolution.[3] These relationships are summarized in figure 1. The curve in the figure plots a measure of aggregated differentials between citizen perceptions and expectations about the legislature. The curve is S-shaped and skewed to the upper right because we would expect sharper correlations between perception-expectation differentials and support in the middle ranges of the former. And we would expect, in the American case, a higher incidence of positive support than of low support. We expect our Iowa data

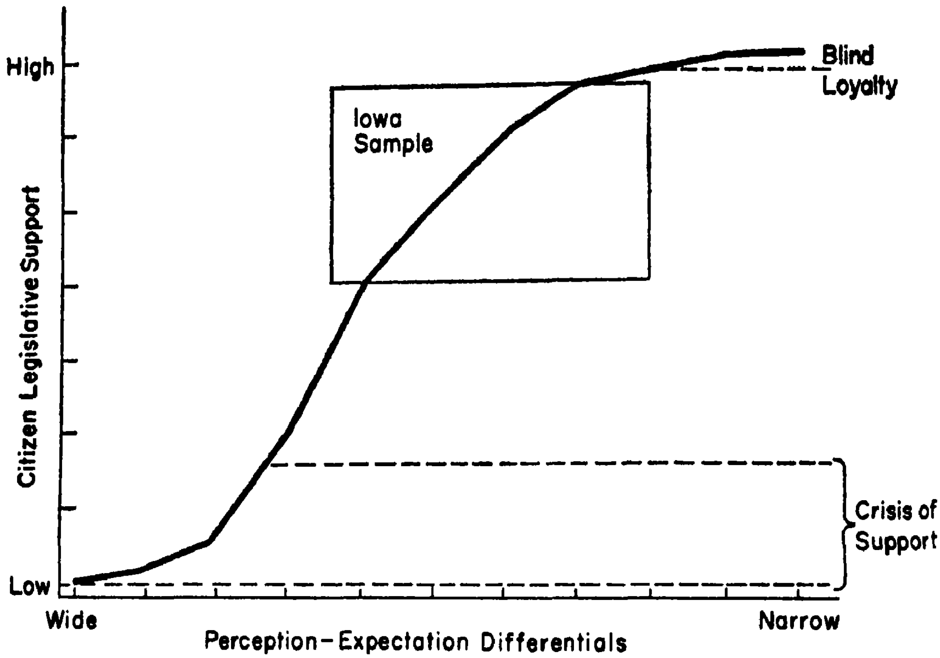


Fig. 1

to fall somewhere within the box in the center of the diagram because citizens' legislative support levels are generally high, and great gaps between expectations and perceptions do not appear to occur.

Figure 2 adds time to the hypothesis, and presents the case in which the perception of the legislature falls somewhat (but tolerably) below the expectation of the legislature for a period of time. But hypothetically, an increasing disparity between the two produces a crisis of support which might ultimately result in sufficient stress on the system to lead to revolutionary change. Though time is an obvious factor in our theoretical scheme, our data are cross-sectional so we can deal only with one point in time.

[3] See, for instance, James C. Davies (1962) and Raymond Tanter and Manus Midlarsky (1967).

These comments may clarify our analytical tasks. We need to compare measurements of civic perception-expectation differentials and measurements of legislative support. How can what we have been calling civic perception-expectation differentials be measured? We have sought to do this with two sets of data from the Iowa survey. One set of data was developed from a series of interview questions asking respondents to scale on a one–ten metric a series of actors or agencies by whom legislators should be influenced, and in the same way to scale the same agencies in terms of whether

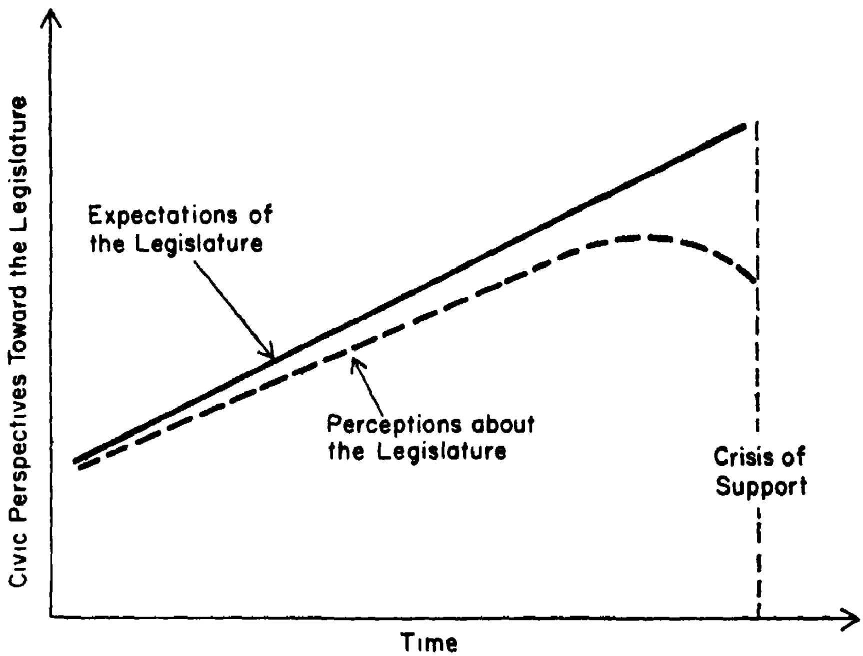
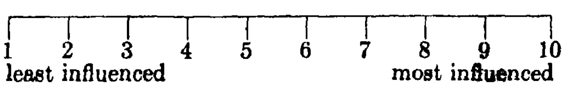


FIG. 2

respondents thought legislators were influenced by them. The metric for each item looked like this:



First, each respondent scored a series of items like, "Legislators should be influenced by the opinions of the citizens of their districts." Later in the interview, schedule respondents scored the same kinds of items in the form, "Legislators are influenced by the opinions of the citizens in their districts." Differences between the "is" and "ought" scoring for each respondent generated his perception-expectation differential score.

Essentially the same procedure was used to assess respondents' perception-expectation differentials with regard to the characteristics of legisla-

tors. We confronted respondents with a set of characteristics which legislators might exhibit, and we asked them to tell us to what extent legislators ought to have the attribute in question, and to what extent members of the legislature had these characteristics.

Thus, we have not sought to measure expectations and perceptions of the legislature as a vague abstraction. Rather, respondents were asked to deal with two concrete aspects of legislative representation: influence agencies

TABLE 1

DIFFERENCES BETWEEN INFLUENCE IN THE IOWA LEGISLATURE AGENCIES OUGHT TO HAVE AND INFLUENCE THEY DO HAVE

(N = 1,001)

Legislative Influence Agencies	Say Agency Has Less Influence Than It Should (%)	Are Congruent (%)	Say Agency Has More Influence Than It Should (%)	Influence Agency Ought to Have: Mean	Influence Agency Ought to Have: Rank	Influence Agency Does Have: Mean	Influence Agency Does Have: Rank	Mean Difference
Constituents	43.7	48 2	8 2	8.20	1	6.84	1	−1.36
Statewide opinion polls	34 2	50.3	15.6	6 72	2	6 13	3	− .59
Experts in legislature	29 3	52.2	18.6	6 64	3	6.24	2	− .40
Experts in state gov't	25 1	53.9	16 0	6 42	4	6 19	5	− .23
Governor	13.8	47 9	38 4	4 92	5	5.99	6	+1.07
Labor	18 0	43 6	31 2	4 58	6	5 64	7	+1.06
Party leaders in the legislature	8 6	36.3	40 3	4.51	7	6.13	3	+1 62
Chamber of Commerce	20 2	57.6	22.3	4 17	8	4.39	10	+ .22
Farm Bureau	15.8	44 2	34 7	4.12	9	4 99	9	+ .87
Chairmen of state parties	9 4	45.0	45.7	3 80	10	5.58	8	+1.78
National Farmers Organization	14 6	56.7	27 7	3 59	11	4.15	12	+ .56
Banks	10 9	40.0	29 3	3 19	12	4 22	11	+1.03
Insurance companies	7.9	53.6	38 6	2.58	13	4.11	13	+1.53

and the characteristics of legislators. Since responses to our questions about these two matters have considerable intrinsic interest, and we need to explicate the shape of our data regarding them so that our use of them in analyzing support can be better understood, we shall now present the aggregate results from the Iowa sample.

PUBLIC ATTITUDES TOWARD LEGISLATIVE INFLUENCE

Our respondents rated the thirteen agencies of legislative influence listed in table 1. First, they indicated on a ten-point scale the ones which they thought ought to be influential in the legislature; then, they rated them

again in terms of the degree of influence they thought the influence agencies actually had. We will present three separate analyses of the responses from the two ratings of influence agencies. Table 1 shows two analyses. The first simply shows the distribution of respondents dealing with each agency of influence separately. We divided the distribution into three categories. The "congruent" group consists of respondents who, within a latitude of three points on the rating scale, felt the particular agency in question had about as much influence as it ought to have. On either side of this congruent group we show the proportions of the sample who felt the particular agency had more or less influence than it should. The second analysis in table 1 shows the sample means for each rating, the rank orders, and the differences between means.

It is plain from table 1 that there are discontinuities among agencies of influence with the legislature in terms of public perceptions and expectations. Of the agencies rated, constituents are thought to be the most underrepresented in terms of influence in the legislature. Forty-four percent of the Iowa sample felt that constituents have less influence in the legislature than they should have, while they ranked first as the agency that ought to have such influence. Although ratings of constituent influence produced a large negative mean difference between expectations and perceptions of influence, constituents were also rated by respondents as the agency which has the most influence in the legislature. In general, the order of expected and perceived influence follows that of (1) constituents and polls reflecting public opinion, (2) experts, (3) party leaders, and (4) interest groups. For constituents, polls, and experts, respondents tended to feel that agencies have *less* influence than they should in greater proportions than the view that they have *more* influence than they should. For all of the other agencies of influence, a higher proportion of respondents felt they had more influence than they should rather than less. The rank order correlation between perceived and expected influence agencies is very high (r_s = .91).

The largest gaps in differences in mean rankings are for legislative and extralegislative party leaders. Legislative party leaders fall at the median rank in expected influence, but are ranked third by respondents in the aggregate in perceived actual influence (tied with statewide public opinion polls). But a relatively high proportion of the respondents felt party leaders have more influence in the legislature than they should. Again, note that 46 percent of the Iowa sample indicated that state party chairmen have more influence than they should. The difference of score means here is very high and positive (they score higher in perceived than in expected influence).

Interest groups generally fall at the bottom of the rank orders of perceived and expected influence. Unlike constituents and experts, who show a negative difference between expected and perceived influence, but like party leaders (including the governor), interest groups are thought to have more influence than they should. Labor, banks, and insurance companies show the highest differences in means, while farm organizations and the

chamber of commerce show the least differences between expected an perceived influence.

Table 2 shows the results of a factor analysis of the "ought" response from this analysis. Four factors were extracted and rotated by the Kaise varimax method. The factorial structure of responses rating the influenc agencies ought to have is very clear-cut and conforms exactly to our intu tive groupings. The same factor analysis was run for responses to the rating of perceived actual influence, and this analysis produced virtually the sam factorial structure, so we have not shown it. The factor analysis reinforce with concrete evidence our tendency to talk about perspectives on the Iow

TABLE 2

FACTOR ANALYSIS OF AGENCIES WHICH OUGHT TO BE INFLUENTIAL IN THE LEGISLATURE

Legislative Influence Agencies	Factors			
	I	II	III	IV
1. Farm Bureau	.793	.018	−.177	.01
2. National Farmers Organization	776	−.038	−.133	.18
3. Insurance companies	.631	.188	.244	.26
4. Labor	616	158	−.083	.26
5. Banks	569	177	.245	.45
6. Chamber of Commerce	.522	.305	.023	.39
7. Legislative experts	.085	.857	−.067	.13
8. Experts in state government	160	.794	−.111	.18
9. Statewide public opinion polls	095	− 031	−.822	.19
10. Constituents	011	.365	−.612	− 10
11. Party leaders in legislature	.082	151	−.031	.83
12. Chairmen of state parties	.291	.123	022	.76
13. Governor	.272	.054	−.205	.52
Cumulative total variance (%)	33 6	45 1	54.1	61.6
Cumulative explained variance (%)	54.6	73 3	87.9	100.0

NOTE.—Items *1–6*, interest groups; *7*, *8*, experts, *9*, *10*, constituents and polls reflecting public opinior *11–13*, party leaders.

influence structure in terms of four major groups of agencies rather tha thirteen separate agencies.

From the standpoint of our analytical objectives, it is comforting to fin some variance in perceptions and expectations of influence. From the poin of view of the stability of the Iowa political system, it can be suggested tha there does appear to be a relatively high degree of congruity between ex pected and perceived influence. Not only do Iowans tend to feel that influ ence lies about where it ought to, but they tend to regard the system a structured such that citizens have the most influence on the legislature an interest groups the least influence, with experts and party leaders occupyin the middle ground. Both the perceived and expected influence structure and the congruency between them undoubtedly indicate satisfaction wit the system and should mean generally high levels of legislative support i this population.

CIVIC PERSPECTIVES ON LEGISLATOR ATTRIBUTES

What kind of a person *should* a legislator be in the minds of his constituents? and, What do constituents think legislators *are* like? If citizens' images of legislators depart severely from their conceptions of the kinds of people who should represent them, then support for the legislature is likely to be low. We asked respondents in the Iowa sample to evaluate a set of twenty attributes which have variously been suggested as characteristics legislators have, or ought to have. These attributes are listed in table 3. First, respondents were asked to indicate to what extent they thought legislators ought to have each attribute, ranking each on this scale:

1	2	3	4
very important	pretty important	not too important	not at all important

Then, respondents were asked to make judgments about roughly what proportion of the members of the legislature actually had each attribute, gauging them on this scale:

1	2	3	4	5
all	most	half	few	none

The entries of mean scores in table 3 were generated by assigning one–four points for responses to the first set of rankings, and scoring respondents from one to five on the second set.

As a group, the respondents in the Iowa sample ranked attributes of good character, knowledge and ability, and social status highest, and they ranked attributes of personal gain or manipulation lowest. When the rank orders for attributes legislators have are compared to ranks for characteristics they should have, some rather dramatic shifts occur, especially at the top of the ranks. While being completely honest ranks first as a trait legislators should have, it drops to the median rank of attributes legislators are perceived to possess. The highest ranking for perceived attributes is for political party loyalty. On the other hand, citizens tend to regard legislators as more friendly, influential in their districts, and prestigious than they should be, in terms of ranked importance. At the same time, the two ranked orderings are highly correlated ($r_s = .64$).

It is apparent that the items listed in table 3 could be grouped into several sets, and doing so helps to reduce the complexity of dealing with twenty categories. More importantly, we were interested in a clear analysis of what we were measuring in assessing differences between expected and perceived legislative attributes. Thus, we factor analyzed both the ratings of characteristics respondents felt it was important for legislators to have and those attributes respondents felt actually characterized the legislature.[4]

[4] Because two of the items in table 3 did not produce unambiguous factor loadings ("friendly toward others" and "just an average citizen"), they were omitted from further analysis.

The factor analysis of legislator attributes is displayed in table 4; the factorial structure for actual perceived characteristics is so similar that we have not shown it. Six factors accounted for more than half of the variance in scores, and the factorial structure is quite unambiguous. We have added to the factor analysis presented in table 4 the mean of the means of items from table 3 included in each factor, and the rank order of factors based upon these means.

The highest ranking factor in terms of mean scores, Factor II, included items having to do with the purposive activity of legislators and is among the top two factors in accounting for variance explained. The second rank-

TABLE 3

MEANS AND RANKS OF SCORES FOR CHARACTERISTICS OF LEGISLATORS

(N = 1,001)

Characteristics of Legislators	Important for Legislators to Have the Characteristic		Extent to Which Legislators Actually Have Characteristic	
	Mean	Rank	Mean	Rank
Completely honest .	1 08	1	2 50	10
Study problems thoroughly....... ..	1 18	2	2 36	8
Know will of people of district....	1.27	3	2 31	7
Hard working...	1.30	4	2 30	6
Interested in serving others.	1.32	5	2 26	5
Special knowledge about state government..........	1 46	6	2.40	9
Friendly toward others	1 51	7	2 14	2
High prestige in community....... ..	1.64	8	2.17	4
Influential in own district.....	1.64	9	2.16	3
Concerned with small details.............	1.97	10	3.01	17
Trained in legal work..	2 01	11	2.84	15
Just an average citizen.........	2.09	12	2.51	11
Loyal to his political party.	2 14	13	2 06	1
College graduate.. ..	2.46	14	2.66	12
Change things slowly if at all	2.51	15	3.10	18
Held previous office...	2.55	16	2.69	14
Between ages 45–55..	2.78	17	2 68	13
Political beliefs that do not change..........	2.92	18	2.85	16
Only interested in reelection..........	3 58	19	3.35	19
Seek personal gain or profit......	3 64	20	3.54	20

TABLE 4

FACTOR ANALYSIS OF CHARACTERISTICS LEGISLATORS OUGHT TO HAVE

Characteristics of Legislators	Factors I	II	III	IV	V	VI	Means of Items Included in Factor	Rank of Importance of Factors
1. Held previous office	.719	−.007	.091	−.043	−.047	.105	2.45	4
2. Trained in legal work	.686	.141	.000	−.036	.247	−.007		
3. College graduate	583	.074	−.029	−.047	−.036	.336		
4. Between ages 45–55	.471	−.062	.341	−.040	.114	.142		
5. Interested in serving others	− 009	.804	−.043	−.084	.059	−.010	1.32	1
6. Study problems thoroughly	−.082	.737	.007	−.174	.062	.047		
7. Special knowledge of state gov't	345	.713	−.007	−.004	−.012	−.085		
8. Hard working	.057	.436	−.193	−.340	−.052	.289		
9. Seek personal gain or profit	.018	−.067	.813	−.001	.058	.018	3.61	6
10. Only interested in reelection	.109	.004	.755	.027	.010	.130		
11. Influential in own district	.333	− 069	.133	−.653	.055	−.131	1.45	2
12. Know will of people in district	−.143	.323	.039	−.637	−.152	−.169		
13. Completely honest	− 169	.101	− 105	−.552	.144	.226		
14. High prestige in community	.250	.147	−.037	−.513	.088	.166		
15. Concerned with details	.054	.078	−.063	−.138	.804	−.121	2.24	3
16. Change things slowly	.112	−.006	.206	.043	.655	.256		
17. Political beliefs that don't change	.091	−.023	.275	.073	.052	.703	2.53	5
18. Loyal to political party	287	.020	−.009	−.167	.040	.691		
Cumulative total variance (%)	16 8	30.1	36.9	43.2	49.3	55.0	....	....
Cumulative explained variance (%)	30.6	54.6	67.0	78.5	89.6	100.0	....	....

NOTE.—Items *1–4*, experience factor; *5–8*, purposive activity, *9, 10*, self-motivation; *11–14*, community status; *15, 16*, slow and deliberate change; *17, 18*, party loyalty.

ing factor, Factor IV, including honesty, knowledge of and influence in the legislative district, and community prestige, can be given the summary label the "community status" factor. The factor ranking third, Factor V, can be called the "slow and deliberate change" factor from the manifest character of the two items highly loaded on it. The fourth ranking factor in terms of means, Factor I, accounts for nearly one-third of the explained variance and deals with the experience or preparation of legislators. The party loyalty factor, Factor VI, ranks fifth in mean scores, followed by self-motivation, Factor III. The factor analysis and mean scores for the twenty legislator attributes rated by respondents suggest, therefore, the following hierarchy of expectations about the characteristics of legislators: (1) purposive activity, (2) community status, (3) slow and deliberate change, (4) experience, (5) party loyalty, and (6) self-motivation. A similar analysis was carried out for respondents' ratings of the twenty basic attributes in terms of whether legislators actually exhibited them. The rankings of similar factors for perceived actual attributes were: (1) community status, (2) purposive activity, (3) party loyalty, (4) experience, (5) slow and deliberate change, and (6) self-motivation. This shift in the rankings of factors suggests the nature of differences between Iowans' expectations and perceptions of legislator attributes. The community status and purposive activity factors reverse positions; party loyalty exchanges places with slow and deliberate change; experience remains fourth in rank, and self-motivation is at the bottom of both rankings.

MEASUREMENT OF LEGISLATIVE SUPPORT

We measured our dependent variable—public support for the legislature—with seven Likert-type items, which are given in table 5. These items measure the degree of citizens' commitment to the legislature as an institution and their predispositions to compliance with its enactments. In the table we have simply shown responses trichotomized as high, medium, or low support. We have factor analyzed these items, and two distinct factors develop. One is a compliance factor and the other is an institutional commitment factor. Since raw scores from these separate factors are highly correlated ($r = .66$), our measurement of the dependent variable will proceed from the data for all seven items together.

Although the data in table 5 make it clear that large proportions of the Iowa respondents expressed attitudes of compliance with the laws passed by the legislature, preference for legislative lawmaking, and commitment to the existence of the legislature as an institution, some notable variations are evident. The least support of the legislature was evinced by the question of the governor taking the law into his own hands rather than waiting for the legislature to act. More than one-fourth of the sample agreed that there were times when the governor should do this and only 12 percent strongly disagreed. Nearly one-sixth agreed that sometimes citizens should take the law into their own hands without waiting for the legislature to take action, although more than one-half disagreed and more than one-fourth disagreed strongly.

TABLE 5

ATTITUDES OF SUPPORT TOWARD THE IOWA LEGISLATURE

(%)

Legislative Support Items	Direction of Support	Legislative Support: High	Medium	Low	Don't Know	Total
There are times when it almost seems better for the citizens of the state to take the law into their own hands rather than wait for the state legislature to act.	Disagree	28.0	51.7	14.4	5.9	100.0
If you don't particularly agree with a state law, it is all right to break it if you are careful not to get caught.	Disagree	42.1	52.6	2.1	3.2	100.0
There are times when it would almost seem better for the governor to take the law into his own hands rather than to wait for the state legislature to act.	Disagree	11 8	54.0	25.8	8.4	100.0
Even though one might strongly disagree with a state law, after it has been passed by the state legislature one ought to obey it.	Agree	21.6	71.7	2.9	3.8	100.0
One should be willing to do everything that he could to make sure that any proposal to abolish the state legislature were defeated.	Agree	9.8	62.6	13.9	13.7	100.0
If the Iowa legislature continually passed laws that the people disagreed with, it might be better to do away with the legislature altogether	Disagree	16.4	62.1	12.4	9.1	100.0
It would not make much difference if the constitution of Iowa were rewritten so as to reduce the powers of the state legislature.	Disagree	6.9	59.2	12.1	21.8	100.0

NOTE.—N = 1,000 male adults.

In contrast, very marked support for the legislature was indicated by the high proportion in the sample of those whose responses showed that they felt citizens ought to comply with laws passed by the legislature whether they agreed with them or not. Less than 3 percent were willing to agree that it was all right to disobey the law. These data suggest that, for some people, extraordinary action by the governor or by citizens can sometimes be acceptable substitutes for the legislative process. But outright failure to comply when the legislative authority has been exercised is rarely acceptable.

There was a higher incidence of no response to the question on the items involving retention of the legislature and reduction of its powers, but the pattern for the three items is quite similar for those who did respond. Across these items, about 12 percent were willing to consider abolishing the legislature or reducing its constitutional powers. More than two-thirds did not wish to reduce legislative power; 72 percent agreed that proposals to abolish the legislature should be defeated, and more than 78 percent disagreed that the legislature should be abolished if it persistently passed disagreeable laws.

PERCEPTION-EXPECTATION DIFFERENTIALS AND SUPPORT

Although the general level of public support for the Iowa legislature seems very high, it is variable enough for analytical purposes. We can proceed now to test our basic hypothesis, which we shall do by testing two subhypotheses:

a) If there is a wide differential between the legislative influence citizens perceive is wielded by interest groups, constituents, experts, and party leaders, and the influence citizens expect they ought to have, then legislative support will tend to be low. If perceived and expected influence are roughly congruent, legislative support will tend to be high.

b) If there is a wide differential between the attributes which citizens perceive as actually characterizing legislators and their expectations about what a legislator ought to be like, then legislative support will tend to be low. If perceived and expected attributes are roughly congruent, legislative support will tend to be high.

We are now in a position to present the analysis of these hypotheses.

The conditions in the Iowa data obviously are not ideal for the support of these hypotheses. The sample is very homogeneous in that support for the legislature is very high and not extraordinarily variable, and there are not great gaps between expectations about the legislature and perceptions of it in the terms in which we have measured these things. If there is any substantial support in the data for our hypotheses, we would consider the test a strong one, since they have been tested in an unlikely place for dramatic support of them.

We have tested our two subhypotheses in the following manner: for each set of factors (shown in tables 2 and 4) for expectations and perceptions we selected the most congruent and the most incongruent respondents on the basis of two criteria: consistency of responses and level of expectations. The application of these criteria led to the selection of respondents which would juxtapose the most congruent and the most incongruent perception-

expectation responses for each factor. Respondents were also factor scored from the principal component analysis of the legislative support items, so that differences between congruent and incongruent respondents could be assessed in terms of mean factor scores for legislative support. The tests for mean differences in support between congruent and incongruent groups with respect to both subhypotheses are arrayed in table 6. As a whole, this array displays means which do not show great absolute differences. However, for half the factors, differences between extreme congruent and incongruent groups in support for the legislature were statistically significant. Insofar as so-called influence agency factors were concerned, significant differences did occur between congruent and incongruent respondents with

TABLE 6

MEAN LEGISLATIVE SUPPORT SCORES FOR CONGRUENT AND INCONGRUENT PERCEPTION-EXPECTATION GROUPS

	Perception-Expectation Differentials				
	Congruent		Incongruent		Significant Differences
Factors	Mean	N	Mean	N	(t-test)
Influence agency factors:					
Public	2 39	61	2.16	178	$p < .05$
Experts	2.34	175	2.20	65	N.S.
Interest groups	2 31	179	2.09	35	$p < .05$
Party leaders	2.29	90	2.18	162	N.S.
Legislator attribute factors:					
Purposive activity	2 22	125	2.19	93	N.S
Community status	2.51	150	2.10	81	$p < .01$
Slow and deliberate change	2.35	116	2 27	95	N.S.
Experience	2.34	157	2.19	78	$p <$ 05
Party loyalty	2 25	134	2 17	88	N.S.
Self-motivation	2.46	144	2.25	91	$p < .01$

respect to general public and interest group influence. In both cases, mean differences were significant at the .05 level. With respect to legislator attribute factors, significant differences were extant for half of the factors. Mean legislative support scores of congruent and incongruent groups were different at the .01 level for the community status and self-motivation factors, and different at the .05 level for the experience factor. Furthermore, in the cases of the other factors, mean legislative support in the congruent group was somewhat higher than in the incongruent group, although the differences were not statistically significant.

CONCLUSION

The basic hypothesis tested in this paper is that congruence between perceptions and expectations about the legislature leads to high support for the legislature, and incongruence between perceptions and expectations leads

to low support for the legislature. The Iowa sample provides tentative confirmation of this hypothesis. There is a quite remarkable congruence between perceptions and expectations in Iowa. The very high correlation between the rankings of perceptions and expectations is a clear indication of this congruence. Support for the legislative institution in Iowa is also quite high. This is indicated in table 5, where the answers to the seven items dealing with support are presented. Another indication of this high level of support can be given. When the answers to the seven support items are combined, a scale of support can be developed with a range from a low score of four to a high score of twenty-eight. The mean for the total sample is 22.3, which is highly skewed in the supportive direction. Thus, as they are measured for the Iowa sample, congruence between perceptions and expectations is high and support for the legislature is high, suggesting the validity of the basic hypothesis.

Congruent and incongruent groups on each of ten factors were compared on their levels of legislative support. For each factor, the congruent group had a higher mean support score than did the incongruent group; however, in only five cases was this difference statistically significant. While each of these groups constitutes only a small subset of the total sample, the analysis of their support scores adds confirmation to the general hypothesis we have explored.

We already have shown that support for the legislative system is sensitive to differences in social and political structure (Boynton, Patterson, and Hedlund 1968). Legislative support increases as one looks from the bottom to the top of the structure of socioeconomic status, and is greater at high than at low levels of political awareness and participation. One of the next steps in our analysis will be to investigate the nexus between perception-expectation differentials and differences in social and political structure as joint determinants of variations in support for the legislature.

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Student Politics and Political Systems: Toward a Typology

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Prevailing analyses of student politics focus upon noninstitutionalized modes of political behavior and upon the social-psychological attributes of participants. This approach tends to ignore the importance of structural links between political system, university, institutionalized, and noninstitutionalized student politics. The major forms in which institutionalized student politics appear in different nations are closely linked to the attributes of the political and educational systems of each nation. The major system linkages which determine these forms are government control over university structure and financing, and recruitment to political careers through party sponsorship of university student aspirants. The prevailing form of institutionalized student politics where both of these links are present is factional competition among political party branches. Where both are absent, university student government prevails. Where recruitment is low and government control is strong, national student unions predominate and, where the reverse condition obtains, political party branches and clubs A rationale for the typology is presented, and its application to four cases. The relative persistence and effects of the student movement are then discussed in terms of the movement's emergence in one or another of the four situations defined in the typology.

The relatively sudden appearance of student activism on American campuses has produced a variety of explanations. Some of these have a built-in obsolescence as the observer finds that events overtake him. The events at Berkeley may now seem pale in the light of the outbreak at Columbia. The structure of a prominent group of activists or of the entire body may change as the issues move from nonviolence in the South to opposition to the administration over Vietnam, while the epidemic of student violence sweeping Europe demands a comparative perspective. Is there anything in common among the demonstrators at Sproul Hall, the students who took over Hamilton Hall, the heart of the college at Columbia, the Berkeley fringe currently allying with the Black Panthers and supporting some of them in running

[1] Revised version of a paper read at the Sixty-third Meeting of the American Sociological Association, August 26–29, 1968, Boston, Massachusetts. We wish to thank the Canada Council and the Humanities and Social Science Research Fund of the University of Toronto for financial support. We gratefully acknowledge comments and criticisms by Wilbert E. Moore, Charles Tilly, Charles E. Bidwell, and Mayer Zald, although we are ourselves totally responsible for our conclusions. We would also like to mention our indebtedness to Judith Clavir and David Hunter for research assistance, and to Miss Teresa Corcoran and her staff for their secretarial aid.

for state office, the students at Leeds University in England who trampled the wife of a Conservative party member of Parliament, the French students who precipitated a national crisis, and the German students who took particular aim at Axel Springer? By the same token, what are the broad differences between these outbreaks? One need not stop here; we may also wonder about student activism in developing nations and in semideveloped Latin America.

Studies of American activism fall into three identifiable categories. The first identifies the activists and compares them with control groups of nonactivists. Flacks (1967) and Trent and Craise (1967) have argued that a majority of the activists tend to be the brightest and ablest students at high-quality universities, from above-average socioeconomic backgrounds, and with a wide spectrum of occupational opportunities open to them. They are in fact the privileged. Those who are not so bright, able, privileged, and activist are more liberal than their peers who did not go to college because "exposure to and persistence in college is associated with an increase in intellectual disposition and autonomy, while exposure to work alone is associated with a tendency toward regression on these two personality dimensions" (Trent and Craise 1967, p. 45).

Flacks (1967, p. 57) argues that activists possess a high distrust of "conventional institutionalized roles. . . . This is most importantly expressed in the almost universal desire among the highly involved to avoid institutionalized careers. Our data suggest that few student activists look toward careers in the professions, the sciences, industry, or politics." In an unpublished paper, Derber and Flacks (1967) have investigated the links between student activists and their families, and find that they originate in what they label "humanist" families, characterized by values such as romanticism and intellectualism, quite at variance with both the dominant culture and families in the mainstream of the American upper middle class. Thus "our view is that children raised in humanistic families are potential recruits to a wide variety of 'deviant' student subcultures, the student movement being one such subculture. Others include intellectual and artistic subcultures and 'bohemian' and 'drug' subcultures. The actual choice that a student makes among these subcultures depends upon a number of situational factors, e.g. the college which he attends, the friends he first meets in college . . . etc." (Derber and Flacks 1967, p. 10).

Derber and Flacks (1967, p. 54) further state that "one important fact about the current student movement is that its core consists of youth who are searching for an alternative to established middle-class values." This line of argument rules out generational conflict between "humanistic" parents and their activist children. Furthermore, Derber and Flacks believe that the number of "humanist" families is increasing, although they do not say why. Keniston (1967*a*, p. 111) supplements this line of argument by distinguishing between the dissenters who are alienated and those who are activist, a continuum that runs between these two ideal-types, although the dissenters share roughly the same backgrounds. The alienated who "bug

out" are psychologically disturbed due to the interpersonal dynamics of their families, influenced by the pace of social change (Keniston 1967*b*).

The second important category identifies the student movement as yet another American social protest movement, which is doomed to failure. This is persuasively argued by Lipset and Altbach (1967). It is bound to fail because, as Lipset has persistently argued, the basic leftward thrust of American society, with its liberal ideology, makes it difficult for movements to innovate unless they find themselves so far to the left that their impact is thereby lessened. This is presumably the path that he sees student activism taking. To Flacks the dominant American culture is conservative, whereas to Lipset it is liberal. Lipset and Altbach also point to important organizational differences between universities which account for differential recruitment into the ranks of student protesters.

The third important category is the notion of generational conflict. This has confused some investigators. Derber and Flacks argue that activists are not involved in generational conflict because their orientation flows from their families of origin. But a generational explanation does not depend on student activists reacting to their own families—quite the reverse. The theory, as advanced by Feuer (1967) to explain the New Left, argues that activists choose issues and enemies which function to enable them to channel hostility toward older generations in general, rather than families in particular, whether these be older radical groups, university administrations, or governments.

To reject consideration of generational explanations is to ignore one of the most fundamental of sociological variables, that of age. What is particularly significant about generational explanations is that, in advanced industrial societies, adolescence lasts longer. Thus generational criteria become ambiguous.[2] Accordingly, graduate students and even faculty members can still be defined as adolescents and certainly as members of the rebelling generation. It is possible to consider balding ideologues as members too, especially in the United States (Berger 1960, p. 13). Furthermore, to quote Heberle (1951, p. 125), "the differentiations *between* generations are likely to be greater in periods of rapid social change than in periods of slow and gradual change." As far as higher education is concerned, the university systems of advanced industrial societies have been in a state of rapid change since the end of World War II.

We do not disagree with the microsociological findings concerning the correlates or the structural factors in student activism. But with the exception of the social movement and generational theories, as presented by Lipset and Altbach and by Feuer, microsociological findings do not even hint that the nature of student activism is connected with the political system. Explanations for political behavior are therefore being offered within the limits of the student culture or subsystem itself, and without any comparative perspective. Both of these deficiencies are surprising because the study of student political behavior in the new nations has been both con-

[2] Cain refers to this as "age status asynchronization" (1964, p. 288).

cerned with the relationship of students to the political system and with international comparisons.

The approaches to student politics discussed above have a common focus, which has, however, not been sufficiently articulated.[3] They are concerned to account for the emergence, determinants, and characteristics of *noninstitutionalized* forms of student politics. Such phenomena share with other noninstitutionalized, collective behavior, the attempt to reconstitute the social order, in terms of a generalized belief which identifies and characterizes some source of social strain and proposes a solution to this strain (Smelser 1962, pp. 1–22, passim). Thus, students protesting at Columbia University perceived serious contradictions or strains in the relationships of the university to society, in its role as property owner of adjacent ghetto neighborhoods, and its participation in the nation's war effort through the Institute of Defense Analysis. Analysis by student activists expressed the generalized belief that these relationships were evil and should be altered or terminated, and that confrontation through student occupation of university buildings would force a reconsideration and modification of these relationships, leading to a more constructive role for the university in its environing neighborhood and in the larger society. For our purposes, the important feature of such student political activity is that it bypasses existing institutionalized arrangements for aggregating and articulating student interests. But we will argue that the form, persistence, and consequences of such issue-oriented protest movements are significantly affected by the existing structural relations between the university and the state and between student politics and the environing political system, at both the local and national levels. An understanding of these effects requires prior analysis of the relationship between these structural arrangements and *institutionalized* forms of student politics, such as student government or the student political party. Our strategy, then, will be to indicate how variations in the indicated structural arrangements are related to variations in the forms of institutionalized student politics. Following this analysis, we will seek to show the consequences of these relationships between formal structures and institutionalized student politics for noninstitutionalized student politics.

Our intention is to suggest:

1. The degree and type of student political behavior can be illuminated by emphasizing the relationships among the characteristics of the political system of a society, the student politics of that society, and the system of higher education. Comparatively, student political behavior will differ according to formal and cultural differences between political systems.

2. The degree and type of student political behavior will consequently be greatly influenced by the *linkages* between the political system and the subsystem of student politics and the system of higher education.

Thus what has been discussed in the literature as student "activism" we regard as a form of noninstitutionalized politics, constrained by the different

[3] Flacks has suggested the possibility that the student movement in the United States may move "toward institutionalization as an expression of youth discontent" (1967, pp. 73–74). See also Newfield (1967, pp. 154–58, passim).

limits which societies place on this category of behavior. Our approach t this category of political behavior emphasizes its relationship to systems an system linkages. The independent variables are the political system and th system linkages, and the dependent variable is student politics, in both it institutionalized and noninstitutionalized forms. The social-psychologica correlates of student political behavior and the extent of generational con flict become important intervening variables.

POLITICAL SYSTEMS

If we consider the formal and cultural properties of political systems, w mean such attributes as:

1. The stability and legitimacy of the system of government.
2. The differentiation of the political system.
3. Whether the political system is federal or nonfederal.
4. The forms of party organization within the political system.
5. Whether the political system is a two or multiparty system.
6. The degree of elitism in political decision making.
7. Unique cultural/political values.
8. Where the political system falls along a continuum from democracy to totalitarianism
9. The structure of the political system in terms of the division of powers among th executive, legislative, and judicial parts of the system.

SYSTEM LINKAGES

We would argue that the most important system linkages between bot student political behavior and the system of higher education are:

1. The financial structure of university education in relation to the government or gov ernments of a society, both as regards students and the indirect funding of thei education.
2. The degree of political freedom allowed to students.
3. The autonomy of universities in their degree of freedom from political interference.
4. The extent to which a career in student politics involves the expectation and the an ticipatory socialization for a career in the political system itself.

THE ORGANIZATION OF INSTITUTIONALIZED STUDENT POLITICS

We argue that the social organization of student politics can be broke down, or collapsed, into the following:

1. National student unions, which aggregate student interests right up to the level o negotiations with governments on basic issues, such as scholarships, provision of resi dential facilities, etc.
2. Student political clubs or branches of national political parties, including minorit parties, such as the Communist party in Western countries.
3. Factional politics, in which student branches of national political parties compet for student support in the struggle to control university government as well as to in fluence national politics.
4. University student governments, whose focus is intramural and specific to a particula institution of higher education.

KEY SYSTEM LINKAGES: THEIR RELATIONSHIP TO STUDENT POLITICS

We will emphasize two system linkages as crucial here, since they appear t be of fundamental importance in generating the prevailing forms of studen

politics under various conditions. These are the process of political career recruitment as this relates to the university, and the degree of centralization of government control over university financing.

We initially came to this typology through an emphasis on the notion of the *political career*. The political career is a system linkage mechanism and, we consider, one of the most important. Yet it is extraordinary how much it has been neglected. We came to it by our reading of Cloward and Ohlin's *Delinquency and Opportunity* (1960). To put their argument in simple terms, they state that there are three kinds of delinquent subcultures: the criminal, the conflict, and the retreatist. The first involves an integration of age levels and values between the adult and adolescent world, the visibility of role models, and an available career within criminal organizations. The links to organized crime are not available to members of conflict and retreatist gangs. It is tempting to transpose their entire typology into the concept of a student political career for its explanatory value. Thus the professional student politician (as in England) finds an integration between his world and that of adult politicians, that is, a ladder of mobility. In the United States this does not occur, so that student activists tend to be conflict oriented while the alienated are the retreatists.

The availability of political careers to students is a function of the character of the political party system and its relationship to higher education. Where political parties are highly organized and centralized at the national level, and are thus able to sponsor mobility into professional political careers, they are likely to turn to universities as sources of able, well-educated candidates. This in turn leads to the development of student political clubs or branches of national political parties on university campuses, where aspiring politicos may become socialized and prove their mettle to party recruiting agents. Where parties are relatively decentralized and loosely organized, the structural conditions for sponsored mobility within universities are weak. Thus, political clubs or party branches as recruiting centers are likely to be absent or poorly developed. Student political clubs thus link student politics to the political system through the medium of individual careers.

The second system linkage concerns the interests of students as a "class," at least in the sense of sharing a common concern for the character of their education and its outcomes. This is significantly determined by the relationship of government to the financing and control of higher education. Where a government agency channels all or most of the funds to finance higher education, and where the same agency plays an important role in instituting new universities, courses of study, examination procedures, and the like, this centralization of authority is likely to have its counterpart in a strong, centralized organization of students at the national level—the national student union.

Where neither of these features appears—centralized party organizations able to recruit party careerists through sponsorship of promising student aspirants, or the centralization of financing and structuring of higher education by government—the salient form of institutionalized student

politics is likely to be university student government. Under these conditions, the concerns of students as a class become decentralized, largely focused upon student concerns for managing that part of their lives for which the individual university allocates authority to student representatives, such as housing, athletics, and other extracurricular concerns. Students may seek to extend their authority into the arena of academic and administrative decision making, but in either case this is likely to take the form of relatively disconnected activities of student governments on individual campuses. Recruitment to student government leadership roles may have a latent recruitment function, but this is more likely to lead initially to careers in the economic than the political system, since an important function of student governments is the management of large sums of money and numerous employees within student union establishments.

Where both of these conditions obtain—centralization of political leadership recruitment, and government financing and structural control of universities—we may expect the existence of both national student unions and political clubs or party branches. This implies the merging of the political recruitment process with that of the process of aggregating and articulating student class interests. Under these conditions, we might expect to find the campaigns for office in national student unions conducted by the student branches of national political parties. Thus, aspirants to political careers may learn political skills and demonstrate political competence through leadership in university government and in national student unions. The latter two organizations are likely to be closely linked under these conditions, and national student union executives are likely to be chosen from experienced officeholders in university student government.

But the juxtaposition of both of these structural links is likely to have a further, qualitative consequence for the form of student politics. The linking of student class interests through student political party branches is likely to generate and sustain a strong concern among students for influence in the national political arena, and this is liable to be reciprocated by the public and by political party leaders, who watch the outcomes of student campaigns as an indication of the present political sentiments of future elites. Thus we would expect the emergence of student political factions under conditions of intense competition for support, influence, and career benefits.

Nothing in the above discussion is meant to suggest that all four types of student politics may not coexist within any one system. Rather, we are emphasizing the long-term persistence of these various types under relatively sustained conditions. In fact, we might go so far as to assert that the recent and present outburst of student revolts, or noninstitutionalized forms of student politics, while highly significant in themselves, will most probably give rise to persisting student movements under the conditions discussed immediately above, but will diminish, if not "wither away," where one or both of these conditions are absent.

Table 1 presents a schematic version of the major determinants of the forms of institutionalized student politics and their outcomes for the *predominant* and *persisting* forms within national political educational systems.

The following discussion provides an application of the typology to concrete cases.

UNIVERSITY STUDENT GOVERNMENT

In a decentralized political system such as the United States, which is federal, highly democratic, and in which the division of powers involves the constitutional development of a strong executive, the system linkages involve a decentralized funding of higher education, political interference with university autonomy, and no expectation that a career in student politics leads to a career within the political system itself.

Consequently, national student unions are nonexistent or weak, as are student branches of the national political parties. The former are weak

TABLE 1

INSTITUTIONALIZED FORMS OF STUDENT POLITICS

Recruitment to Political Careers through Party Sponsorship of University Student Aspirants	Government Control over University Structure and Financing	
	Strong	Weak
High.	Factional competition among political party branches	Political party branches, clubs
Low.	National student unions	University student government

because there is no centralized authority entrusted with national control of higher education with which to bargain. The latter are weak because recruitment to political careers is not tied to high visibility of performance in student branches of national political parties. The antipathy to elitism as a political system attribute would militate against such recruitment. A most important consequence is that, before undergraduates seriously consider a political career, they are older than some of their peers in other countries, and they often develop political ambitions as graduate students in law schools or at certain levels within business organizations. Indeed, constitutionally, there is an age limit below which a politician may not enter the Senate. The comparative elderliness of politicians thus provides fuel for generational conflicts by contrast to the youth of undergraduates.[4]

The important types of student political organizations, therefore, are university student governments, which negotiate with administrations over basic student facilities and are generally nonpolitical. University student governments may emulate the tactics of issue movements, but there seems to be a structural obstacle preventing the progression to extremism. This

[4] Recruitment to political candidacy in the United States for local, state, and national offices is essentially a process under local control (see Herbert Jacob 1962; Lester G. Seligman 1961; Seymour M. Lipset 1963, p. 362; Heinz Eulau et al. 1961; and Dwaine Marvick and Charles R. Nixon 1961).

obstacle may be that student governments are constantly involved in negotiation with administrations, and threaten to use extremist tactics only when crises arise, not within the country but within the restricted locale of the campus. Members of student governments probably do not maintain informal or even formal social contact with ideological groups, who often regard them as having been co-opted by the administration. Issue movements tend to become involved with campus affairs only when their behavior, externally oriented, runs up against administration hostility. When campus matters and crises, such as the plight of the Negroes in the urban ghetto, converge, then issue movements take the university administration as their target. Student politics are then caught in the inevitable progression to extremism, as occurred at Columbia, where the university's relationship with Harlem was a focal point of the disturbances.

We cannot cite evidence for this, although it probably exists—that members of university student governments in the United States are experiencing anticipatory socialization for adult political careers.[5] The relationships of student representatives to the university president is analogous to the role of state or national legislators in their relations to their respective executives. It would be interesting to know how many of these men were prominent in university student government, went on to careers in law or business, and then entered adult political careers.

NATIONAL STUDENT UNION

France and Great Britain offer a different combination of variables in the typology. In France, the political system is unstable, nonfederal, and elitist, with frequent intervals of antidemocratic paternalist government. The civil service is particularly elitist and difficult to enter. There is a multiparty system. The universities are totally dependent on governmental subsidy, and decisions on higher education are highly centralized in the government and its civil service.[6] As in the United States, recruitment to political candidacy is a locally controlled process. French legislators are often elected on the basis of holding a local office, which they retain while holding their national office (La Ponce 1961, p. 234; MacRae 1967, p. 54, table 35).[7]

The result is a powerful national student union, the Union nationale des étudiants française (UNEF), which indulges in what amounts to collective

[5] Studies dealing with the political socialization of state and national legislators in the United States suggest that involvement in school politics or student government plays a relatively minor role (see Allan Kornberg and Norman Thomas 1965; and Heinz Eulau et al. 1959, p. 308).

[6] For the historical circumstances leading to this situation, see Theodore Zeldin (1967), and, for the present structure, see F. Ridley (1963).

[7] On the other hand, "the university has been, for a long time, the most important nursery of political men," according to Mattei Doggan (1961, pp. 77–79). His evidence suggests that the university has a politicizing effect, imparting political skills, but does not reveal the link between student political party branches and political careers we find for England and Latin American countries. Jean-Pierre Worms states that student political leadership is not linked to adult political careers in France (personal communication).

bargaining with the government over matters affecting students (Field 1967; Pinner 1964, 1968; Worms 1967). The results of a breakdown in bar gaining are analagous to what happens in the economy—strikes and shar industrial strife, which is often very violent when student demands ar frustrated. But French students are from upper-socioeconomic groups when compared with the social composition of university students fron other advanced industrial societies, as table 2 demonstrates

The consequence is that the UNEF is strong and stable, except whe frustrated, as, for instance, by the contemporary central governmental allo cation of resources to the *force de frappe* and the neglect of higher education Why, then, does the UNEF occasionally become wracked by internal politi cal dissension and transformed into an issue movement? The answer seem to be historic, that is, cultural and structural. Historically, the nationa student union has failed to take a political stand, especially in avoiding alliance with the resistance to German occupation during World War II

TABLE 2

PERCENTAGE OF UNIVERSITY STUDENTS FROM WORKING-CLASS FAMILIES

Country	Year	%
United States	Early 1950s	31 0
Great Britain	1961–62	25.0
Norway	1961	25.0
Austria	1958–59	8.0
France	1961–62	5.5

SOURCE.—A. Belden Fields 1967, p. 30.

This was in line with its limited goals. But a group within it, the *minoritaires*, began to function as an issue movement, as during the Algerian war and against Gaullist policies. They are resisted by the *majoritaires*. But structurally, because of the centralization of government control over higher education and the consequent importance of the UNEF, the *minoritaires* desire to radicalize the UNEF rather than operate as a minority group outside of it. Tactically this is most effective because the government and the *majoritaires* cannot ignore them, due to the system of collective bargaining.

The *minoritaires* are often *narodnik* in orientation but are not welcomed by the labor unions, who perceive them as members of the *haute bougeoisie*. They turn inward, to theoretical abstraction, to Marxism, and to the consistent attempt to radicalize the UNEF. This rarely succeeds, so the French student movement is not a movement at all. It is a formal organization, recognized by the government with which it negotiates, which spasmodically endures the pressure of issues brought up by the *minoritaires*, before it resumes its normal existence as a national student union. The *minoritaires* use its salience to bring specific and general issues before the society. The great recent success of the militants was based on the fact that student mat-

ters, usually negotiable, were given low priority by the regime because of investment in policies which the *minoritaires* rejected. The confluence of student dissatisfaction and anti-Gaullism has for a time allowed the national student union to draw upon that dissatisfaction and to bring both that and Gaullist policies before the nation in a dramatic fashion.

POLITICAL PARTY BRANCHES

Britain has a stable and legitimate system of government, which is nonfederal and elitist. There are strong and permanent party organizations (in contrast to the United States), built around parties, rather than men, which exist and function between elections. In terms of the system linkages, all universities are centrally funded by a body composed of senior civil servants and the heads of universities—the University Grants Committee. The result is that the universities have virtual autonomy in their financial affairs despite central funding (Bowen 1964). Students are allowed considerable political freedom; and, perhaps in this society more than in any other, a career in student politics involves the expectation and the anticipatory socialization for a career in the political system itself. This develops from a unique situation in which Oxford and Cambridge provide the great majority of members of Parliament. This used to be less true of the Labour party, but the large proportion of the sons of manual workers at even these universities—in Oxford at least 70 percent of the student body is subsidized by scholarships and loans—means that the Labour party too has been recruiting Oxonians and Cantabrigians in large numbers since the war, in preference to older labor union leaders and party workers (Ranney 1965, p. 202, table 7.5; Rose 1964, p. 72; Guttsman 1965, pp. 156–58). The University of London, despite its size and position in the metropolis, is badly represented and has been a training ground for the leaders of new nations rather than for the top political positions in the mother country.[8] The Conservative party is predominantly drawn from the public schools (i.e., prep), especially from Eton and Harrow as well as from Oxford and Cambridge. In these schools, political sentiments are overwhelmingly Conservative (Weinberg 1967, p. 118, table 12).

The unique position of Oxford and Cambridge may reflect a cultural value of the political system. But the combination of political system attributes and system linkages means that students may enter these universities with the intention of making politics a career. The form of student political organization which results is the student political club affiliated with national political parties. The latter use the clubs as recruiting grounds for future members of Parliament as well as for the party organization. There is intense competition for high office in these clubs, especially between their respective right and left wings. Both face each other in the Oxford and Cambridge Unions, which are modeled on the House of Commons. Political activists tend toward careers in law, journalism, television, and

[8] Edward Shils (1960, p. 337) writes that "the London School of Economics in particular has probably contributed much more to the excitation of nationalistic sentiment than any other educational institution in the world."

college teaching, to wait for their opportunity to enter the House of Commons. The intensity of system linkage tends to result in the socialization of both Labourites and Conservatives toward the political center, for specific issues are hammered out within and between the political clubs.

This situation weakens the spontaneous appearance of protest movements—such as the Campaign for Nuclear Disarmament—which are forced to filter their policies through the clubs, which function as a damper on the progression toward extremism. The National Union of Students is also weakened because of the interaction of political system attributes and system linkages and is mainly a service organization for students in terms of arranging vacation trips abroad, etc. The National Union of Students cannot gain support at Oxford and Cambridge and, unlike its French equivalent, does not bargain with the government, due to the decentralization of funding. The social organization of students may now be changing. In 1967, a Radical Student Alliance (RSA) was founded, bringing together activists concerned with specific issues and students dissatisfied with more direct governmental control and with facilities at the new universities (Halsey and Marks 1968). In the older universities the RSA is strong at institutions such as Hull and the London School of Economics, where facilities are considered poor and overcrowding is common. We may predict that, if the combination of political system attributes and system linkages is altering, then a politicized national student union may emerge, but, as yet, it is too early to judge. But this demonstrates that a change in an element of the typology can forewarn of a change in the social organization of student politics.

FACTIONAL COMPETITION AMONG POLITICAL PARTY BRANCHES

Latin America will be treated here as a single case, despite the variations among the twenty-some nations. But our generalizations will be based primarily on those nations which have attained moderate to high levels of economic and political development, such as Chile, Argentina, Uruguay, Peru, Venezuela, Colombia, Brazil, Costa Rica, Panama, Mexico, and Cuba. As political systems, these societies are frequently interrupted formal democracies, characterized by highly centralized executive authority of relatively weak legitimacy. In contrast to the other societies discussed heretofore, the institutions of the church and the military have played inordinately important political roles both in influence and in actual political leadership. This statement applies least to Chile, Uruguay, Costa Rica, and Mexico. Party systems vary from one-party dominant systems, as in Mexico, to multiparty systems, as in Argentina.

With respect to system linkages to higher education, the central government provides the predominant source of funds (Scherz-Garcia 1967). Formally autonomous, the universities have experienced frequent interventions into their internal affairs by various governments, especially during dictatorial regimes which have suspended autonomy and have not respected the norm of the inviolability of the university. The universities face serious problems due to inadequate financing, which results in poor libraries, in-

sufficient research facilities and study space, part-time professors, inadequate housing accommodations, overcrowded lecture halls, and a host of other difficulties (Scott 1968).

Most universities are highly politicized due to a combination of attributes. The most important is perhaps that student political leadership has often led more or less directly to political careers, either through recruitment of activists into political careers or the organization of new parties among university students which become important national parties, some of them coming to power through the electoral process or by means of a coup or revolution (Martz 1966, pp. 17–48; Alexander 1965, pp. 120–26; Dix 1967, pp. 345–46; Walters 1968, p. 198; Canton 1966, pp. 96–97). Political connections are highly relevant to career success in nonpolitical careers as well, constituting a further impetus to political activity. The consequence is that, in most of these societies, university branches of national parties play an important role in university affairs, seeking to win university elections and often gaining direct support from their parent parties, who perceive university students as important constituents and as a significant source of future leadership (Patch 1961).

Government control of university financing and the structure of higher education has its counterpart in strong university student organizations at the university and national level, in the form of national student unions and their university affiliates (Bonilla 1959, 1960; Walters 1968). The importance of these for organizing student opposition is recognized by dictatorships, which often abrogate them on coming to power. In societies dominated by elites, as these are, students are often the only group in society capable of and willing to express the interests of the "inarticulate masses." This adds to their national prestige and to their threat to unrepresentative governments (Silvert 1964).

The phenomena of political party branches and national student unions are closely related to the Latin American student movement. The University Reform movement is dated from 1918 in Argentina, where its most significant successes were achieved, but limited agitation for university reform occurred earlier in other Latin American countries. The major significance of this movement from our perspective is that it institutionalized "co-gobierno," or the concept of direct participation in university government by student and faculty representatives. This has meant that, where the movement was successful, which it was to a greater or lesser degree in most of the Latin American republics, student representatives run for positions on both university and school or faculty decision-making bodies. In Argentina, the Reforma Universitaria party, including most political groups on the left and some of the center, won most elections for the governing council of the university until recently (Walters 1968, pp. 168–72). Elsewhere, students run for office under the banner of national political parties, as in Peru, Chile, Colombia, and Venezuela. When new movements or parties have emerged, these have tended to be incorporated into the university political subcultures, presenting slates of candidates and seeking to dominate university government as their counterparts seek to dominate the national government.

IMPLICATIONS OF THE TYPOLOGY FOR NONINSTITUTIONALIZED STUDENT POLITICS

We will now consider the implications of the typology for noninstitutionalized student politics. While we cannot attempt to account for the emergence, frequency, or intensity of student protest in terms of our scheme of analysis, we can suggest some aspects of the form, persistence, and direction which student protests are likely to take under the differing conditions set forth in the typology. Our focus here is on those forms of student politics which utilize means outside those available in the various institutionalized forms discussed above, and which seek goals beyond those delimited by the existing arrangements for expressing student interests. Our major concern will be to suggest the extent to which various forms of noninstitutionalized student activism are likely to be incorporated with, or otherwise linked to, ininstitutionalized forms of activism, perhaps modifying the latter in the process of adaptation.

We have touched briefly on the fate of protest movements in the French and British cases; thus we will concentrate on the American and Latin American cases in the following discussion. These provide, in terms of our typology, the situations in which our two major variables are weak and absent, in the American case, and strong and present, in the Latin American case. As a general hypothesis, we would argue that, in the former, student protest is least likely to become incorporated into the stream of national politics and to affect institutionalized forms of student politics, due to the weakness of structural links between university student and national politics. In the latter case, because of strong structural links between university student and national politics, noninstitutionalized protest is most likely to affect national politics and to become institutionalized, in the form of new student political groups or branches of new national parties, joining the competition for student votes and national influence. Some support for this hypothesis is offered below.

NONINSTITUTIONALIZED STUDENT POLITICS IN THE UNITED STATES

In American universities, recruits to protest movements are brought together in the better universities due to their high grade-point average, their intellectual and aesthetic orientations derived from their families of origin, and their political awareness. As Flacks (1967, p. 57) says, they have no interest in political careers as such. Any national crisis will cause this concatenation of a politically active minority, but, given the structure of the political system, and its specific combination of attributes, their actual political behavior will tend toward the noninstitutionalized forms of protest. They may resort to ideological abstraction and various forms of civil disobedience from violence to nonviolence. The comparative elderliness of politicians in the political system intensifies their generational hostility, and they look for allies, not within the political system itself, but among the downtrodden groups in society, which leads to a *narodnik* orientation, or

among similar groups at other universities, which results in a quasi-Leninist form of elitism.

In short, they are caught in the inevitable push toward extremism because they are not constrained by the limits of the political system, due to the absence of links to political careers and the high degree of freedom that the political system allows to students. The progression toward extremism results in the fractionation into ideological groups, which come to argue among themselves at the most abstract levels, but whose social base is limited by the fact that some students do not wish to go as far, or resist the trend toward extreme positions. Thus fractionation results in the proliferation of small and quite varied groups. The latent function of Trotskyists fighting Maoists or Leninists is to ensure the relative powerlessness of American student movements. When they become linked to national crises, such as the problems of Negroes or the war in Vietnam, and work with their generational elders within the political system, the progression toward extremism is halted, and their impact on the political system can be considerable. But immersed in their undergraduate student political subculture, these groups are insulated from the political system (Lipset and Altbach 1967).

Their members define their futures outside of the political system by rejecting careers in law and business, which would give them the opportunity to enter conventional politics at a later date. A societal factor has its influence here as well. Because the media in America are defined as businesses, they do not tend to attract intellectuals. Those who enter the media become professionalized, so that careers in the television or newspaper industry do not provide the waiting period for later entrance into a political career for the former members of issue movements. As these members tend to congregate at the better universities and to be above-average students, imbued with the value of intellectualism, a proportion may take up careers within the academy itself. This provides the ranks of graduate students in the arts and sciences with politically active recruits, and eventually, the professoriate itself. It is partly for this reason that the American intelligentsia is oriented toward the university, for it provides a career and security, yet its latent function is to further insulate the former members of issue movements from the political system. Role conflict often develops between the expected professionalism of the academic and his political interests, especially if his professional expertise is sought by legislators and others operating within a political system to which he has fundamental objections.[9]

NONINSTITUTIONALIZED STUDENT POLITICS IN LATIN AMERICA

At present there is an absence of data for Latin America directly comparable to those available for American students, to distinguish between the "activist" and "nonactivist" student. The data that exist suggest that activist students are more likely to attend large national universities located in national capitols, to come from religiously less devout, lower-middle-class families, which are more likely to support parties of the center or left, rather than the right.

[9] For example, see Harry S. Hall (1956).

In terms of career orientations and fields of study, they are more likely to be enrolled in the humanities, law, or social sciences than in other professional fields such as engineering or medicine (Lipset 1967, 1968; Silvert 1964: Hennessy 1967; Walker 1968; Glazer 1968). But while the analysis of the characteristics of the activist student in North America is essentially focused on those who are involved in noninstitutionalized forms of student politics, the boundary between these and institutionalized forms, and between students engaged in the one or the other, is less sharp in Latin America. Highly institutionalized student organizations frequently engage in protest marches which erupt in violence, when police or counterdemonstrators seek to thwart their attempts to influence the populace and the government (Bonilla 1959, pp. 229–30, passim; Walters 1968, pp. 160–65, passim). The most radical student groups, such as Communists, Fidelistas, and others frequently win university elections as legitimate student parties for seats on university governing councils. The goals of leftist as well as centrist and conservative student groups are likely to be similarly diffuse—the attempt to influence university decisions, through direct participation in "co-gobierno," to influence the trend of national politics through confrontation with police in street demonstrations or through consultation with government leaders, and, for some student leaders, to fashion political careers for themselves by demonstrating their organizational and oratorical skills before an audience of interested political professionals.

In contrast to the American situation, the political activist is much more likely to be interested in a political career, either as a full-time professional politician or else as a publicist or otherwise engaged intellectual, who often combines a career as university lecturer, practitioner of a profession, and commentator upon and activist in political life. This suggests the lower degree of differentiation in Latin American professional life in contrast to that of North America and, to some extent, Europe. Thus, the Latin American activist is likely to find a more open environment for the practice of politics following graduation, and is thus less likely to eschew a political career as an aspect of his commitment to student political activity (Ellison 1964; Gillin 1960, p. 42; Goldrich 1966, p 117, Table B-2; Walters 1968, p. 12).

These features of Latin American political life, both within the university and in the environing society suggest that political activity may be easily integrated with other professional commitments, perhaps in part because the latter are likely to be weaker, but also because the structural links between university and government and between student and "adult" political careers are more closely integrated. The limiting case would include those students for whom none of the legitimate parties appears to offer a solution to their ideological commitments, and who choose to join a revolutionary guerilla movement, as have some students inVenezuela, Colombia, Peru, and even Argentina (Petras 1968; Harding 1968, pp. 25–27). But the success of university student-founded political parties like the Accion Democratica in Venezuela, which developed as a revolutionary movement but became an institutionalized, governing party after the overthrow of Perez

Jimenez, and the success of the 26th of July Movement in Cuba, in which students participated and were rewarded with positions in the revolutionary government, suggest that even those who choose the alternative of violent opposition are not foregoing political careers but, rather, are seeking them by other, if more risky, means.

To conclude, what is often referred to as *the* Latin American student movement tends to be an amalgam of relatively stable parties and ideological tendencies and groups, supported by a well-structured political subsystem linking universities and the national and international political environment, acting through participation in university government and more expressive activities such as demonstrations directed at the national government, opposing "imperialism," or supporting workers or fellow students and co-believers elsewhere. The movement is frequently regenerated by coups which abolish its formal structure and stimulate the formation of opposition movements to restore the time-honored principles of university reform, or by new political groups or protest movements which seek to further radicalize the movement, on the model of the Cuban Revolution or the Vietnam war for liberation. Thus new movements tend to be added to the existing political tradition and structure in the form of a modification of the ideological stream and new parties or political groups seeking political power which look to the universities for recruits and general support (Spencer 1965*a*, 1963*b*; Walker 1967). In contrast, student political movements in the other three situations defined by our typology tend to diminish and eventually die out, since they lack strong university student government, national student unions, or party-recruitment channels to which they could link themselves. Typically, such movements are essentially generational phenomena, and disappear often in a radically short time, as supporters of the movement graduate and move into nonpolitical careers.

CONCLUSIONS

We have attempted to provide a framework for the comparative analysis of institutionalized student politics by emphasizing the links between the larger political environment and the university political setting. This approach helps to account for the persistence of predominant forms of student political activity in various national settings. Further, by defining the characteristics and boundaries of such institutionalized forms, we are able to account for some characteristics of noninstitutionalized student politics in these different settings.

One major hypothesis which our analysis suggests is that, where the institutionalized forms of student politics are closely linked to university government and adult political career recruitment, as in Latin America, student demands for major changes in society are more easily incorporated and expressed within the existing, "legitimate" student organizations, as part of their institutionalized roles. In the United States, and to some extent in Britain, demands for major societal change are of necessity beyond the purview of the localized and relatively insular university student politi-

cal organizations. This means that student protesters in the latter settings tend to recruit those without specific political career goals, and seek to create novel, ad hoc organizations to carry out their activities. The lack of structural links to university student government or to national political parties of such organizations weakens their impact and fails to constrain their tendencies toward extremism. In the Latin American and, to some extent, in the French cases, the stronger structural linkages between university and/or national politics provide a stronger basis for the organization of protest, and increase the probability of the protest movement's partial success, or else its incorporation into and thus ideological moderation by existing political organizations.

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The Power and Functions of Boards of Directors: A Theoretical Synthesis[1]

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Many social scientists have assumed that the boards of directors (governing boards) of corporate organizations control their organizations in name only. Others, examining the relationship of American social and business elites to the operation of welfare organizations and elite social clubs conclude that they are controlled by their boards. This contradiction is resolved by a theoretical analysis of the external "detachable" resources, personal characteristics, and strategic contingency situations conducive to more or less board power vis-à-vis executives. Bases of board power include control of resources and knowledge about organizational operation. Personal characteristics affecting board members power are social status and sex. Strategic contingencies are events of organizational life cycles, such as mergers, major program and goal changes, and selection of chief executives, conducive to the exercise of board power.

Such broad-scale metaphors as "The Managerial Revolution" (Burnham 1941) or "The Power Elite" (Mills 1957) direct our attention to the control of major decisions both at the level of the total society and of large-scale organizations. Although these metaphors and their associated underlying variables lead to hypotheses that may be testable in long historical perspective, they are too gross for short-run analysis. In formulating hypotheses about the control of organizations, for instance, we must specify a range of variables and conditions under which elites or managers may or may not influence important decisions.

Analysis of the functions and conditions of power of boards of directors provides intellectual leverage on this question of the control of organizations. The board of directors of a corporate organization has formal and legal responsibility for controlling and maintaining organizational operation and effectiveness (Lattin 1959, pp. 211–78). The corporate form with its board of directors (governing boards) has been applied to many types of organizations, for example, businesses, voluntary welfare associations, private schools, public school systems, hospitals, and governmental agencies with "autonomous" or independent functions.[2]

[1] This paper was begun during a study of the Young Men's Christian Association of Metropolitan Chicago, supported by a grant (GM-10777) from the Institute of General Medical Sciences, NIH, USPHS. At a later point, a grant from the Vanderbilt University Research Council and a Career Development Award (K-34, 919) NIMH, USPHS, aided in its completion. It is a revised version of a paper delivered at the 1968 Annual Meetings of the American Sociological Association, Boston, Massachusetts. Mark S. Massel, Nicholas Mullins, and James Price gave astringent criticism to earlier versions.

[2] It should be noted that the earliest corporations were religious orders (see Davis 1961).

Yet as the size and scope of organizations have increased, some scholars have doubted whether the formal system of board control does any more than provide lip service to the law. Those who argue that boards of directors are merely a legal and coopted appendage believe organizations are controlled by the full-time managers (Gordon 1945, chaps. 5 and 6). They believe boards are at the mercy of the managers who control information, definitions of alternatives, the nominating process, and, indeed, the very agenda of decision making.[3] On the other hand, some students—especially those looking at welfare organizations and the American stratification system, note that boards have ultimate power to hire and fire executives which shapes executives' decision premises (Hunter 1963, pp. 231–36; Baltzell 1958, pp. 364–83).[4]

The pervasiveness of the corporate form in America and the disagreement over the importance of boards of directors relates not only to sociological questions but to policy ones as well. Although this essay does not deal directly with policy issues, it is worth noting that questions of the proper and improper activities of boards of directors preoccupy several arms of government.

In this theoretical synthesis of propositions about the power and influence of boards of directors our general orientation is that, in the relationships among boards (as collectivities), individual board members, and executives, each party brings to bear "resources." These resources may be based in legal rights, in monetary control, in knowledge, or even in force of personality and traditions Resources may be crudely classified as "detachable" resources, personal characteristics, and strategic contingency situations. It is the balance of resources for specific situations and decisions that determines the attribution of relative power in the encounter between boards and executives.

It must be noted that the power of boards of directors or of individual board members does not refer to their formal voting rights. As in so many voting situations, formal voting may be irrelevant to many (though not all) of the crucial decisions. Instead, the power of board members relates to their service on and control of key committees and the extent to which

[3] "I've been concerned and at the same time both amused and somewhat guilty about the fact that the Board of Directors makes policy decisions, both by authority of the by-laws and in the actual voting they do; yet actually in the present day family casework agency the staff has to "educate" the Board constantly and persistently and it certainly does choose the elements of education which lead toward the conclusions of which the staff approves. In other words, we tell them how to vote and they vote and we call that process 'the Board sets the policies of the agency. . . .' I can frankly cite very few instances when Board opinion has influenced my judgment about policy and practices during the (many) years I have been Executive of this agency, although the Board has made every important policy decision and has been 'informed' ad nauseum before every decision." This is from a letter written by the executive of a family service agency in 1956 (see Wilensky and Lebeaux 1965, p. 273).

[4] Heffernan (1964) shows how social work executives moderate their political activities to keep in the good graces of their boards.

other members and the management (who may also be board members) find it necessary to be bound by their perspectives and ideas.

The corporation form (as we have come to know it) was created as a means of accomplishing "desirable" ends that were beyond the capabilities of individuals. Boards of directors were created and recognized in law in order to insure continuity in the management of organizations and to fix a locus of responsibility for the control of "independent" organizations.[5] Boards are charged with the proper use of resources in pursuit of organizational goals. Directors are not personally responsible for organizational losses, but they are responsible for prudent action in behalf of the "owners" (whomever that might be).

Prudent action includes appointing and perpetuating effective management of the organization and overseeing the work of such management. This control function of the boards of directors is inward looking; the board operates as the agent of the corporation at the request of the owners (members) to oversee organizational activity.[6]

Because of their formal position of responsibility and their involvement in the organization, boards also develop an outward-looking function; they promote and represent the organization to major elements of the organizational set, for example, customers, suppliers, stockholders, interested agencies of the state, and the like. That is, they defend and support the growth, autonomy, and effectiveness of their agencies vis-à-vis the outside world.

Obviously, boards differ in the extent to which they perform either the external representation or internal control functions. For instance, it is likely that boards of prosperous manufacturing firms, in a competitive industry, and with unproblematic governmental relations, have less of an external representation function than welfare agencies heavily dependent on wealthy donors or on the community fund. Similarly, in small organizations in which board members have intimate knowledge, they may decide all nonroutinized expenditures, major personnel changes, markets, and types of product. In other organizations they may be restricted to formal appointment of the executive and the auditor and to setting executive salaries.

Although there is this variety, there are some relatively standard activities in which boards engage and which have implications for their potential power. First, a major concern of boards tends to be personnel. At the very least, boards usually must choose a chief operating officer and decide on his salary (if there is one). Second, boards that are not "paper boards," that actually hold meetings and discuss organizational affairs,

[5] Although much of our discussion is applicable to governmental organizations, most of it is framed in terms of nongovernmental ones. Governing boards and organizations in the "public" sector tend to have less autonomy of organizational operation. Mainly discussing private organization gives our propositions a greater specificity and concreteness.

[6] We usually think of boards of directors as agents of the "owners," but legally they are servants of the corporation vested with corporate control. On the ambiguities here, see Marris (1964, pp. 12–13).

usually review the financial condition of the organization and set financial policy (dividend rates, capital indebtedness, etc.). In some cases the rules and bylaws of the board require formal approval for all nonroutine expenditures over a stipulated amount. Finally, many boards review organizational output, its "product," markets, and comparative operating efficiency. Which of these activities are performed, and to what extent, depends on the structure of the organization, its environmental interrelations, and the sources of board member power vis-à-vis executives.

DETACHABLE RESOURCES A POWER BASE

A resource is "detachable" if it is not closely tied to the person, that is, if it is transferable. Utilizing a cross-sectional approach, we examine gross variables between organizations and between board members causing differences in the relative power of boards and individual board members.

There are two main bases of power considered. First, the relative power of board members can be based on their access to and control of relevant external resources. Second, knowledge relevant to the ongoing operations of the organization may be considered an internal organizational base of power differentially distributed between boards and executives.

EXTERNAL BASES OF POWER

The members of a board of directors may serve largely on the sufferance of the executive or they may "represent" salient blocs of shareholder votes, sources of financial material support, or of community legitimation and representation. In general, *to the extent that board members control or represent salient external "resources," they are more powerful than if they do not control such resources.* (For this and all other propositions, *read* "everything else being equal.")

Stockownership.—Stockownership in a corporation is an external basis of power because it is completely dependent on definitions of legal rights attached to shares. The owner of common stock does not own a "piece" of the corporation, but a right to a certain *proportionate* share of voting power on a restricted list of issues (including the election of board members), declared dividends, and, in the extreme case, the distribution of the corporation's assets. Board member power is related to the relative dispersal of stockownership. *Where stockownership is widely dispersed, board members have low power; where board members represent major blocs of stock, they have high to moderate influence; where shareownership is highly concentrated, only the board members representing the dominant group of owners have high influence.*

Under high dispersion conditions, the incumbent management (chairman and/or the president) controls the solicitation and voting of proxies, nominates all committee chairmen, assigns them to their duties, and controls the internal process of the board. New board members are appointed at the discretion of the nominating committee, which in turn is a creature of

the chairman's. In this situation, the board and individual board members are relatively weak.

By possession of a large enough share of votes, a shareowner (or group of shareowners) can press for a seat on the board.[7] Often such representation is equivalent to partial control, for the management wishes to avoid proxy fights and open conflicts. Therefore, the perspectives of the voting bloc get incorporated in management's decision premises. However, there may be several such blocs.

When one person or family controls a major bloc of stock or even a majority,[8] the power of the board, as a whole, and management declines. Here power is centralized as in the case of the widely dispersed ownership situation, but now it is centralized in the hands of the representatives of the owning family or person. While the "forms" of board action are maintained to satisfy legal requirements, the board serves at the discretion of the controlling owners.

At least since Berle and Means (1932) it has been assumed that the historical trend is toward the dispersal of ownership. This particular generalization has served the interests of those arguing "everyone a capitalist," and it has led to a gross oversimplification of the extent of ownership dispersion. It has also encouraged many scholars to assume that boards are powerless. Villarejo's (1961, pp. 51–52) painstaking analysis indicates that of the largest 232 (out of 250 on the 1960 *Fortune* list) industrial corporations for which data were available, the directors as a group owned 5 percent or more of the stock in seventy-six of them. Furthermore, since this does not include stocks of corporations held by other corporations represented on the board, there is no question but that there is even more concentration.[9] Lundberg's (1968, App. B) more impressionistic, but historically rich, analysis would indicate that about two-thirds of the largest 200 corporations have "large" family holdings. Although direct family ownership of a majority of shares may have declined, the control of stock in beneficial trusts combined with direct ownership remains a significant control base.

External funding and facilities control.—The general proposition about

[7] The ability to "press" for a seat on the board is related to the ability to wage proxy fights and to command the loyalty of other stockholders. The insurgents are more likely to gain other stockholders' loyalties if the company has been unsuccessful in making profits relative to its profit potential. For a dramatic rendering of a proxy fight, see Nizer (1961, pp. 427–524). The ability to press for a seat is also related to the voting rules required by the state. Cumulative voting aids minorities in electing directors (see Williams 1951).

[8] I have been purposefully vague about the percentage of stocks that must be owned by a dominant family. If all other stocks are widely dispersed or held by nonactive groups (e.g., insurance companies, trust accounts in banks, pension funds) even 5 or 6 percent may represent a dominant bloc (see the discussion in Villarejo 1961, pp. 54–55).

[9] Villarejo (1962, pp. 53–54) also studied the distribution of ownership *among* the directors in these 232 corporations. Of 2,784 directors (individuals, some holding multiple directorships), ninety-nine "propertied rich" (those who inherited their shares or who were wealthy before becoming attached to the company in question) owned 73 percent of the shares owned by all directors. Furthermore, 12 percent of *total* shares could be traced to the propertied rich.

the external resource base of board members also applies to control of capital and facilities. For many corporations, profit and nonprofit alike, a major source of board member control and influence stems from their control of crucial inputs of capital, raw materials, or "market."

Control of external resources serves as a lever for board power when the organization finds it difficult to secure these facilities from other sources and requires this resource. We would expect greater dependency on the board members representing banks during depressions than during times of prosperity. Furthermore, industries that are debt ridden would be more likely than others to have representatives of lenders on their boards; the railroads, which are a high debt ratio industry, are reported by Newcomer (1955, p. 54) to have a higher proportion of bankers on their boards than other industries she studied. To the extent that organizations can raise money from ongoing operations, both the money market and the money lender become less important to the organization, and external dependency is decreased.[10]

The proposition about external dependency also applies to nonprofit and voluntary agencies. The historic pattern of raising funds has seen a shift from the support of agencies by a few wealthy philanthropists to mass campaigns and community funds. When agencies were the "agents" of one or two families, or a small circle, the policies and procedures were sharply governed by these members of the board and by the chief funders. As funding shifts to the community fund or to mass drives, the power of the board *as funders* may decrease. Two corollary hypotheses can be stated for voluntary agencies: (1) *The more agencies receive contributions in small amounts from many givers, the less the likelihood of board members having power vis-à-vis the executives.* (2) *To the extent that fund-raising campaigns are based more on a sharp image of need and less on interpersonal relations of board members and fund raisers, we would expect the influence of the board member to be diminished.*

The growth of community funds has a complex relation to the structure of individual boards. The fund represents a centralized source of financial support, and the amount received from the fund can be crucial to the agencies involved.

The funds themselves allocate money through committees made up of businessmen, housewives, and professionals. To the extent that profes-

[10] Commentators of the Berle and Means school have argued that as corporations have grown larger their policy of retaining a large proportion of earnings rather than distributing them as dividends (most of the larger corporations distribute less than half of net earnings) leads to the corporations becoming divorced from the money market, and to the decline of importance of the role of bankers and especially investment bankers. A word of caution is in order. Littner (1959, pp. 166–201) has summarized his studies of the rate of borrowings, bond flotation, and the like. His findings suggest that the rate of corporate borrowings has not declined over time—instead it fluctuates inversely with the cost of money. Furthermore, he concludes that even among the largest nonfinancial corporations there is no long-range trend for increased reliance on internal funds.

sionals dominate the funds, we would expect the boards of the agencies to become less important in interceding for the organization. However, students of these organizations suggest that there is a correlation between the prestige of the boards of agencies and their likelihood of having their requests granted a respectful hearing. Auerbach (1961) suggests that the settlement house serving a slum neighborhood but having an unknown board is less likely than the middle-class agency having a prestige ("power") board to receive a favorable hearing. The high-prestige board member may not only be generally respected but may control significant financial contributions to the fund. If Auerbach is correct, the maintenance of a prestige board facilitates relations with the community fund.

Community legitimation.—Board members may control neither shares nor tangible external facilities and yet "control" an important external resource, a segment of community legitimation. They control community legitimation in that they "represent" diverse groups or interests which can be mobilized to affect the organization. Such organizations as boards of education and government commissions have boards either elected directly by the voters or appointed by the political executive. In general, *the more closely board members are linked to external groups, the more they "represent" community legitimation and, therefore, the more powerful they are vis-à-vis the administrative leadership.* Board members may be elected or appointed and yet not represent group interests if, for instance, appointment is "nonpartisan" and if board membership is largely symbolic. The more diverse and intense the interests in a given organization, however, the more likely the organization is to be politicized and the more likely board members are to represent community segments.

All three of the external bases of power discussed above provide opportunities for factions to arise as groups commanding different resources contend for the definition of organizational goals and directions and for control of the organization. *The larger the number of board members having external bases of power, the more likely are coalitions of board members to arise.* Furthermore, given a number of board members with external bases of power, *the more divergent the definitions of organizational goals and policies, the more likely are the coalitions to resemble factions.*

Even if board members do represent external interests, ownership, or sources of funding, factions need not arise and board members need not attempt to influence managerial decision premises. An ideology of professionalism may lead to an effective abrogation of the role of the board. In such cases, the board serves to provide a mantle of legitimation and community justification (Kerr 1964). Only when a given issue is defined as outside of legitimate professional competence will board members' attitudes and perspectives begin to influence decisions. Thus, Crain and Street (1966) note that, in large cities, on the issue of school policy toward desegregation, it is the board and its attitudes, not the school superintendents' professional or personal perspectives, that predict the outcome of policy debate.

INTERNAL RESOURCES: KNOWLEDGE

Knowledge is a "detachable" resource in that it can be acquired and lost. Detailed knowledge of the organization and its problems is a *sine qua non* of decision making. The board member or executive without knowledge has difficulty influencing the decision process, especially when there are agreed-upon goals. Knowledge can come from detailed familiarity with the specific organization or from general expertise about a given technical process.

Several conditions of organizational size, complexity, and technology condition the ability of boards to have sufficient knowledge to challenge and/or formulate lines of action. At the most general level, sufficient knowledge is a function of the degree of complexity of the organization and the technicality of its knowledge base. *The greater the complexity of the organization and the more technical its knowledge base, the lower the influence of board members.* This proposition leads us to expect, for instance, that larger organizations, with many product lines or task domains and geographically dispersed units, would have a less well-informed board than smaller, more concentrated organizations.

When an organization is small, with few plants, products, and markets, the directors can have independent knowledge of the plants, contact with the staff at several levels, and detailed acquaintance with the community and market situation. As the organization grows larger, the board member becomes increasingly dependent on the staff for his information. Furthermore, the organization is usually structured to channel information to and through the president or chief operating officer. Thus, the board becomes dependent on the executive, and one of their few outside checks becomes the balance sheet, subject to independent audit. Even accounting reports may become so complex that a high degree of familiarity and expertise is needed for their interpretation.

Of course, as the organization becomes larger and more complex, the chief operating officers also become more dependent on *their* staff. But the staff's conditions of work are directly dependent on the executive, and to some extent he is able to use them as his eyes. Even though the executive is formally appointed by the board, his greater knowledge of the full range of organizational concerns allows him to shape the kinds of information they receive and the kinds of matters they discuss.

Boards may be adapted to this imbalance in knowledge by being required to spend more time on organizational affairs (Brown and Smith 1957, pp. 57–59). Sometimes, the appointment of "inside" board members (full-time executives) is recommended as a solution, but the independence of the officer from the chief executive cannot be assured.[11]

The relevance of knowledge to power becomes even clearer if we examine organizations in which various kinds of professionals and scientists furnish

[11] Questions about the functions of inside directors pervade the policy-oriented literature. Wiley (1967) shows that among large corporations there is a slight tendency over time for them to have a greater proportion of outside board members. His findings are at variance with popular stereotypes.

the key services of the organization. For instance, we would expect boar of directors of hospitals to be concerned mainly with financial matte while boards of educational institutions might have a greater say in pe sonnel matters, though not curriculum matters, and finally, boards of su organizations as YMCAs might be involved in decisions about all phases organizational activity. Where the knowledge base is esoteric, the boa is not able to evaluate the requirements of the organization for new lines endeavor, or to evaluate lines of action and personnel except in terms fiscal matters.

Again there are adaptive solutions to the imbalance. Boards may de gate to internal committees the evaluation of projects involving technic decision criteria. Second, they may add to the board members with techi cal knowledge. General expertise, acquired outside of the organizatic becomes a base for power.

To this point, I have offered propositions about bases of power whi increase or decrease the board members' potential to influence the polici of large-scale organization, focusing on external resource control and t relative imbalance of knowledge. However, this cross-sectional approach limited in at least two ways. First, I have played down the identities characteristics of board members that may influence their role in boar Second, I have ignored the process and phasing of boards that lead the to be more or less important and powerful at different times.

PERSONAL CHARACTERISTICS AND PARTICIPATION

Attributes attached to persons such as social status, sex, and personali are very general factors influencing how an individual will relate to othe and how others will respond. While they are not "detachable" resourc (at least to the same extent) as were those discussed in the last sectic they are external characteristics brought into the board-executive relati from the larger society, and they affect the participation and influence board members.[12]

SOCIOECONOMIC STATUS

Given the structure of American society and the function of boards controlling property, in legitimating voluntary agencies, and in linking t activities of diverse institutions, it is not surprising that members of boar of directors tend to be selected from the higher reaches of the stratificati system. While some organizations, such as YMCAs and settlement hous may dip into the middle-middle class[13] for a few board members, mc

[12] Goffman (1961, p. 30) distinguishes between "external resources" and "realized sources" to discuss the exactly parallel phenomena of how external resources beco determinants of interaction locally realized.

[13] In our study of the Chicago YMCA, less than 10 percent of the almost 1,000 boa members of the thirty-seven local departments were rated in 1961 as earning less th $8,000 a year.

board members will be drawn from the higher reaches of the socioeconomic pyramid.

The prestige and status of the board member gives him a reputation which affects others' reactions to him, and it gives him a set of expectations of how others should react to him. In general, *the higher the prestige and status of the member, the more likely other board members and staff are likely to defer to his opinions.*

Of course, reputation and generalized status do not fully determine influence. Strodtbeck, James, and Hawkins (1957) have presented data from jury deliberations indicating that the higher-status jury members are more likely to be chosen as foremen and have high rates of initial participation and, presumably, influence. However, they also note that, over time, the correlation between SES, participation, and influence declines. Generalizing from the findings of Strodtbeck et al., we might expect that, *if the only criteria for allocating influence is participation and knowledgeability, the low-status members who participate highly and are knowledgeable will become equal to the higher-status board members, even though officers will be more likely to be drawn from higher-status members.*

However, if the functions of boards involve more than just deliberation (as in the jury), the external resources of votes controlled, access to funds, and prestige which can be used in interorganizational relations will guarantee to the higher-status board members a greater share of influence. (See the above discussion of the role of "power" boards.) Furthermore, if we compare boards composed of people of different status levels, those in higher-status boards are likely to expect a higher level of deference and influence than boards composed of people from the middle ranks (Moore 1961).

The comments above also apply to the relation of executives *to* boards as well as *among* board members. Some boards employ executives whose salaries and status may be equivalent to or higher than that of the board members (e.g., in some YMCAs and in school boards). If so, executive influence is enhanced.

SEX

Societal role definitions associated with sex also influence board member participation. Babchuk, Marsey, and Gordon (1960) found that, in a middle-sized community, women are more likely to be on boards of smaller and low prestige organizations than on the boards of the larger voluntary agencies—the hospitals and universities. Not only do women have less command of external resources—they rarely represent major bureaucratic organizations—but, on the average, they are socialized to more passive role taking. In boards with male executives, we would expect women to have less influence than men, to participate less freely in discussion, to be less assertive, and to be taken seriously to a lesser degree.

Other personal characteristics also influence board-executive interaction. The range of personality and self-presentation variables that are relevant is well known. Instead of pursuing them, the discussion turns to phases of

organizational growth and change that implicate board power. In these last two sections resources have attached to the individual role occupant. But now we turn to power resources attached to the situation, that is, to the role expectations and definitions created by the ongoing social system.

STRATEGIC CONTINGENCIES SITUATIONS

Examination of the functioning of a board over long periods of time would reveal an ebb and flow of board functions, importance, and power during different phases of organizational development and activity. Organizational phases affect the power of boards in several ways. First, at some points in the history of an organization, the formal requirements of board ratification and action require at the very least that managers get the approval of the board. Even if the board is but a rubber stamp, such periods allow some reinforcement of the image of board power. Furthermore, at such times dissident board members have a chance to crystallize board discontent with management and to express such discontent. At other times, the absence of meetings and debated issues prohibits such expression. Second, the phases of organizational development require the board to perform activities in the service of the organization—such as fund raising—that give it power over the managers. Thus some of our "cross-sectional" propositions (above) may also be implicated in the phase development of organizations.

Let us specify a number of broad organizational problems that not only require board action but also seriously implicate the responsibility of board members to debate and decide organizational matters.

The general proposition is that *it is during the handling of major phase problems, or strategic decision points, that board power is most likely to be asserted.* It is at such times, too, that basic conflicts and divisions both within the board and between the managers and the board are likely to be pronounced. Three types of broad-phase problems are discussed: life-cycle problems, choosing of successors, and fund-raising and facilities expansion.

LIFE-CYCLE PROBLEMS

Life-cycle problems are those of organization genesis, character formation and transformation, and basic identity.

Organization genesis.—When a corporate organization is newly established, or when the board as a responsible agent is being formed, a great deal of attention is likely to be paid to the formulation of policy, the roles of managers and boards, and the formulation of guidelines for actions. *Boards will meet regularly and often, and it is likely that board power and influence will be continuously used and called upon.*

But qualification is in order; many business corporations develop out of individually owned firms or partnerships. If the new board does not control ownership certification, the power of the board may be relatively restricted during this period.

Character crises and transformation.—Organizations develop characters which become institutionalized in procedures and modes of handling problems. Organizational character, a term used by Selznick (1957), is the standard pattern developed for resolving recurring and basic problems and conflicts within the organization and with the organization's environment. These include such aspects of organization environment and intraorganization relations as labor policy, major product emphases, market strategies, relation to competitors, and quality-quantity emphases.

Pressures to change these aspects of character almost inevitably become issues for the board of directors. First, both legal requirements and the standard functions of boards in policy setting become obviously implicated when the major dimensions of the organization are subjected to change. Second, if these aspects of character have developed qualities of the sacred and traditional, as so often happens, changing them is likely to develop conflict. The managers will be forced both by divisions among the managers and by the awareness of concerned board members to bring such matters to the board.

In general, *the more routine and stable the organization in all its aspects—for example, labor, market, financing, etc.,—the less likely are crises of character to occur and the less likely are boards to be mobilized.*[14]

Moreover, *character crises are likely to be more difficult to solve in organizations without computational criteria*[15] *for choosing among alternatives.* For instance, voluntary welfare agencies with their ambiguous goals and unproven means are likely to have more prolonged debate on such matters than are businesses.

Identity crises.[16]—Large-scale organizations have identity crises of several kinds. One is the crisis of mergers in which the existence of the organization as an organization is threatened, even though there is perpetuation of the function and the capital of the organization. A second is the threat to vanish entirely. A third identity crisis is involved in joint undertakings with other organizations. Such joint undertakings partially restrict the autonomy and independence of organizations.

Because there are often clear benefits to be gained through organizational mergers or joint undertakings, it is possible that business corporations, as a class of organizations, have a higher rate of identity crises than other kinds of organizations. However, YMCAs, orphanages, settlement houses, ethnic-based community centers, religious denominations, universities, governmental commissions, and others have all faced identity crises—problems of fission and fusion. Again, it is when issues like these are debated that boards are most fully involved and likely to have influence.

[14] See an interview with Cordiner (1967), former president of General Electric, for a discussion of the role of the board during GE's internal transformation of organizational structures.

[15] The phrase "computational criteria" refers to known means to agreed-upon goals (see Thompson and Tuden 1958, pp. 195–216).

[16] Identity crises are subcases of character crises—i.e., those subcases in which an organization's social recognition as an entity are at stake.

CHOOSING A SUCCESSOR

Often the only real contact board members have with the organization is through the chief executive, and one of the prime responsibilities of boards is the choice of effective managerial leadership. In some organizations the board chooses only the chief executive, but in others the board may take an active part in appointing most upper executives. The amount of active participation in appointing upper executives is probably a good index of its power. More important here, *it is at the time of choosing a successor that board power is most mobilized* (Zald 1965).

Succession processes can vary greatly. Of course, if a dominant executive or controlling group creates a "crown prince" or appoints the successor, then the board as such only ratifies the appointment. A crown prince appointment by a chief executive (not by a controlling ownership group) can only be effective when a retiring chief has been seen as successful. Thus, just as we suggested that the board is more likely to be active when an organization is involved in crises, so too *is it more likely to be active in choosing a successor when the organization is facing a crisis.*

The choosing of a successor often allows the basic questions of organizational mandate, character, and identity to come to the fore. Since the choice of the executive is so closely linked to decisions about organizational directions, it is natural to have a period of stock taking at that time.

Since the mobilization of board influence occurs around the time of succession, the periodicity of succession becomes of great importance. Because of deaths, age, and career patterns, some boards may be confronted fairly often with questions of succession, while others may only confront this question once in a generation. (Some Protestant denominations appoint their ministers yearly, while many larger business corporations try to arrange for ten-year terms for their chief executives.)

CONCLUSIONS

Such phrases as the "managerial revolution" or the "power elite" call to mind great forces and processes in society. Some of the propositions implied by the metaphors are patently true. For instance, it is clear that large bureaucratic organizations are hallmarks of modern society, and, consequently, the heads of these organizations are in a position of potential power. Nevertheless, detailed investigation is required to spell out the conditions of their power and their relative power in different situations. Eventually, a complex theory of power and control in modern society will be required.

Without directly attacking the global questions posed by Burnham (1941) and Mills (1957) we have dealt with one aspect of the phenomena they discuss—the control of major bureaucratic organizations. In particular we have suggested a range of external detachable resources, personal characteristics, and strategic contingency situations that affect the conditions of board power. Many of the hypotheses presented appear

fairly obvious. Nevertheless, taken together, this presentation, I believe, demolishes the cavalier approach to boards taken by both economists and sociologists. Boards of directors may sometimes be impotent, and they may sometimes be all powerful. The question is: In what kinds of organizations under what conditions?

Furthermore, more complex theoretical treatments are possible. Boards may be most implicated in decisions when the unified chain of command is broken up. For instance, as hospitals have come to look more like pluralistic polities, boards may reenter the power arena either at the invitation of the contending parties (Perrow 1963, pp. 112–46)[17] or on their own accord. Furthermore, the stance of the manager may lead to great variation in board involvement and power. Chief executives range from those that are obsequious to their boards, to those that are Machiavellian—manipulating consensus—to those that are disdainful or at least unconcerned with their boards. Executives help to develop traditions of board consultation and influence, and these traditions can become binding upon the organization. Social-psychological variables of interest and commitment are also important, for it may be that lack of interest is a basic cause of the diminishment of board influence.

This work has been largely theoretical. At this point, there is a scarcity of meaningful data, and only at a few points have I been able to tie my arguments to evidence. Boards of directors are hard to study. Often they conduct their business in secret; their members are busy people; the processes themselves are sometimes most effectively described by novelists. Nevertheless, study is possible, and pieces of evidence can be brought to bear. The difficulty of study is more than compensated for by the theoretical and practical importance of the problem.

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[17] Perrow traces out the changing context of board power and involvement in hospital affairs.

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Advertising Themes and Quiet Revolutions: Dilemmas in French Canada

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Advertising themes both illustrate and are themselves sometimes caught in the dilemmas facing many French and English Canadians in the midst of the "Quiet Revolution" in Quebec. In the 1950s, French Canadians in advertising developed advertising campaigns that harked back to the past and reinforced traditional stereotypes. Recently however, supported by English advertising executives, they have catered to the nationalistic strivings of the French Canadians. This article describes how one such campaign backfired and draws conclusions which extend into the broader context of conflict and intergroup relations.

Canada has recently experienced what has popularly been called a "Quiet Revolution." The French Canadians who make up some 80 percent of the population of the Province of Quebec, and most of whom have been economically and educationally far behind their English-Canadian compatriots, rebelled in two respects. First they challenged their tradition-oriented way of life and sought to modernize the province. Second, they fought—not for the first time—against their subordinate status and asserted their rights of equality vis-à-vis the English Canadians. The movement had been smoldering with sporadic manifestations for many years, but its intensity and rapidity, beginning in 1960, was so great that the term *revolution* is not inappropriate. The precipitating event was the death of the leader of the National Union Party, Premier Duplessis, and the victory at the polls of the more dynamic and forward-looking Liberals. The new government, supported by mass media, youth, intellectuals, labor, and significant segments of the church and business community, led the movement to update French Canada economically and socially and to become "maîtres chez nous."

No facet of French-Canadian life remained untouched by the Quiet Revolution. Modernization was one central theme, evidenced in the increase of highway construction, the reform of the police structure, the letting of government contracts by tender, new directions in education, and legislation awarding more rights to women. Renaissance of the French language and culture was another theme, manifested in the increasing exchange of academics, technical specialists and visitors with France; a more liberal movie censorship policy; campaigns to improve the language, spoken and written; and assistance by the government to artists and writers. Expo, the international fair in 1967, was still another indication of the energy and confidence generated. Underlying and giving impetus to the entire movement was a strong spirit of modern French-Canadian nationalism. Nation-

alist pressures came from all directions—the provincial government expropriated an English-controlled power company; labor demanded that union contracts be written in French; editorial writers condemned policies of discrimination against French Canadians in government and industry; numerous groups asked that French become the sole official language of the province; and restaurants in which waitresses did not speak French were boycotted. College students above all served to spearhead many of the demands and took the lead in public displays and demonstrations. Perhaps most symbolic was the withdrawal from the annual St. Jean Baptiste Day parade of the boy, representing John the Baptist, walking with a lamb. No symbol was less appropriate to the times.[1]

As part of a larger study of advertising and social change in French Canada, we have analyzed the themes of French-language national advertising before and during the Quiet Revolution.[2] These advertisements are expressions of a complex situation. Generally, they are written by English Canadians who wish to keep abreast of the changing milieu but not disrupt the socioeconomic status quo. The ads are then translated or adapted by relatively well-educated French Canadians who wish to participate in the Quiet Revolution yet do not wish to endanger their career lines in English-Canadian companies. The advertisements, finally, are directed in French-language media to ethnically conscious French Canadians who are struggling to raise their skills and assert their power. The problems associated with advertising, because their rays extend so widely into the society, strikingly point up issues and dilemmas occasioned by the rapid social change.

ADVERTISING THEMES BEFORE THE QUIET REVOLUTION

National advertising, like other industry in Quebec, was introduced primarily by English-speaking Canadians and Americans. The general policy was to take a very carefully prepared English advertisement and turn it over to a French-Canadian translator for a quick, routine, more or less literal translation. Translation was not considered difficult; presumably anyone who knew both languages could do the job.

Over the years, French-Canadian translators and clerks, through working in advertising agencies, underwent an informal apprenticeship and learned the advertising business. At the same time, doors formerly closed were opened and many French Canadians attained positions of moderate responsibility. In the 1950s, the French Canadians who were moving ahead

[1] The Quiet Revolution has been widely discussed (Royal Commission 1965, 1967; Guindon 1968:33–59; Scott and Oliver 1964; Jones 1967; Garigue 1963; Desbarats 1965; Sloan 1965; Elkin 1964*a*). The classic study of French Canada before the Quiet Revolution is still Hughes, *French Canada in Transition*.

[2] Among topics considered in the larger study are the place of French Canadians in the occupational structure of advertising, the role of their professional association, newly organized French-directed agencies, and issues in bilingual advertising. For a preliminary discussion of some of these issues see Elkin 1964*b*.

in advertising began to argue that French Canadians had a distinctive culture and that French-language ads were often badly translated, inappropriate, and ineffective. Minor adaptations *were* sometimes made: A girl at a typewriter, called Betty in an English advertisement, became Blanche in the French; a coffee ad in the French translation added "Préparé à Québec." But few such changes touched on basic themes, styles or personality differences (Elkin 1961). French Canadians argued that the advertisements were Anglo-Saxon in spirit and were passing the French Canadians by. The ads, they said, should be directed to the values, interests, and dispositions of French Canadians. In a few instances, the French Canadians were permitted to develop distinctive campaigns, the most notable occurring during the Korean War in 1951. A series of ads was developed in which the themes turned back to the heroes of the past, to the heroic explorers, settlers, and pioneers of early Canada. The recruiting ads for the navy, for a life at sea, referred to the courageous fishermen of Brittany and Normandy who founded Canada and such famous sailors of French-Canadian history as Champlain, Cartier, and d'Iberville.

The advertisements for the army above all emphasized the pride in and necessity of defending the French-Canadian heritage. One advertisement showed a pastoral scene with a blazing religious cross in the foreground. The heading was a line from the French version of the anthem *O Canada:* "Protégera nos foyers et nos droits"—protect our homes and our rights. The theme of the air force advertisements sought to establish a link between the *coureurs des bois*, the early French explorers of the forest, and the modern men who fly and handle the planes, both courageous pathfinders appropriate to their times.

To the French Canadian in advertising, the campaign was a veritable milestone. For the first time, tens of thousands of dollars were turned over to French Canadians to create ads to be directed solely to French Canadians. The armed forces campaign had sought to recruit soldiers. Why, argued the French Canadians, could not the same principle be carried over to commercial products? Some companies were willing to try. In 1957, Labatt's Brewery developed a new campaign for its anniversary "50 Ale" known in French as "Bière 50." The English campaign stressed the "modern" touch with scenes of golf and various social activities. The campaign in French, however, featured a short, stocky lumberjack, known as Monsieur Cinquante, wearing a checkered shirt on which appeared a number 50. The lumberjack, strong and fearless, was a well-known symbol in French-Canadian history and lore. A Monsieur Cinquante walked the streets giving out fifty-cent pieces to passersby and appeared on television commercials discussing hunting and fishing in Quebec. In magazine cartoon-type advertisements, he scored a spectacular hockey goal and rescued a skater in distress while holding onto a cliff with one bare hand. The advertising copy spoke of the beer as "brassé dans le Québec au goût du Québec" —brewed in Quebec to the taste of Quebec.

At the same time, Labatt developed still another campaign with a distinctively French-Canadian flavor. This campaign, an institutional type

focusing on the company name, centered on genealogy, a subject of popular and fascinating interest in Quebec. The approximately five million French Canadians in Canada today may be traced back to only ten thousand or so French settlers who arrived on this continent in the sixteenth century. Thus, a relatively small group of men passed down their names to modern French Canadians and many similar names are held by thousands of families.

The interest in genealogy among French Canadians has always been linked with the glory of French Canada's early history. The popular historians portrayed the settlers as courageous, valiant, and hardy pioneers who, under great hardship, cleared the forest, hunted wild animals, fought the Indians, and tilled the land. Labatt, taking advantage of its French-sounding name and the fact that one settler was a namesake, launched a campaign entitled "Vieux noms du Québec"—old names of Quebec. A genealogist traced the ancestry of the most common names, obtaining for each such information as the place of origin in France, the area of settlement and occupation in New France, the date and partner of marriage, and the number of children A brief biographical sketch was written about each settler and an artist made a pen line drawing of the man at his task, for example, tilling the fields, fighting Indians, or sailing ships. These sketches and biographies were placed as ads in newspapers throughout Quebec and offered by letter to anyone whose name was that of the original settler. In all these advertisements, the copy, like the campaign of the armed forces, appealed to the traditional and heroic glory of the French-Canadian past. The sketches were idealized and the biographies written in flowery and embellished style. To cite one example, the family name *Caron:* "It is thus that our gallant ancestors toiled under the yoke of harsh labor and suffering to establish and make prosperous the new colony which has so long and proudly borne the name of New France."

Other French Canadians in advertising seeking to develop distinctive campaigns looked to French Canada's musical and folk heritage. One series of radio commercials for a breakfast cereal employed jingles to the tune of Cadet Rousselle and Le roi Dagobert. Another in the late 1950s which was adapted from two French-Canadian folk songs went as follows:

Il faut bien que je l'admette
Mon amoureux a le genre pique-assiette
Il bouffe mes crêpes suzette
Puis il prend sa casquette
En voyant la vaisselle qui le guette.
Ah, que deviendrais-je, grands dieux!
Si je n'avais pas le Surf Bleu
(Chorus)
Laver la vaisselle est un jeu
Avec le nouveau Surf Bleu
Un petit trempage,
Un petit rinçage,
Et tout brille
Tout scintille,
Y a rien de mieux pour laver la vaisselle
Y a rien de mieux
Que Surf Bleu

In other specific advertisements, French Canadians were substituted for English-Canadian personalities. For example, an English ad pictured King Ganam, a well-known cowboy fiddler; the French-language advertisement substituted a popular French-Canadian recording artist, Willie Lamothe.

Thus, French Canadians in advertising even before the Quiet Revolution were not without influence and were sometimes given budgets to develop their own campaigns. What is striking in these campaigns, however, is that the themes almost always harked back to the French-Canadian past. Heroes were sometimes pioneers of two centuries ago; the lumberjack was a traditional folk figure; the songs stemmed from childhood or an idealized rural life. The appeals were to a heritage, patriotism, and loyalties learned long ago in the schools and around the hearth. None, in the slightest way, suggested any threats to the powers that be, to the tradition-oriented French elite, the superordinate English, or to the ongoing relationships between the English and the French. The military advertisements, for example, did not mention the fate of the French language or culture once recruits joined the forces, and the lumberjack advertisement did not observe that he was an unskilled worker in the employ of the English.

ADVERTISING DURING THE QUIET REVOLUTION

Like other middle-class French Canadians, those in advertising were deeply emotionally involved and eager to participate in the Quiet Revolution.[3] In part, this meant upholding the values of the Quiet Revolution; in part, it meant fighting within the English-controlled advertising world for more French-language advertising, more attention to its quality, and more original campaigns. But herein lay a dilemma. To contribute to the Quiet Revolution and receive recognition from French Canadians, they had to be aggressive toward the English; but if they fought too vigorously they jeopardized their chances for successful careers. In the final analysis, the French Canadians in advertising resolved this dilemma by fighting for French-language advertising while simultaneously stressing their expertise in advertising and their faith in its ideology. (See my forthcoming report.) Specifically regarding the themes of advertising, they promoted ideas which were appropriate to the spirit of the Quiet Revolution, yet effective, presumably, in increasing sales.

Such themes were found, above all, in references to national and ethnic identity. To French Canadians, such advertisements demonstrated a concern with and respect for French Canada; to English Canadians they were appropriate appeals to the emotions of the target group. The French-Canadian ethnic identification was represented in several ways:

1. Testimonial-type references. This is a common device. The person represented may or may not be a public figure, but he is, by name or

[3] The carriers of the Quiet Revolution in Quebec represent a wide range of social levels of which the most significant is probably the "new middle class." See Brazeau (1963) and Guindon (1964).

otherwise, identified as French Canadian. For example, in newspaper or magazine advertisements, an insurance broker, Monsieur Pellerin, is shown using a Pitney-Bowes Automatic Stamping Machine; a Monsieur Lalonde is being interviewed by a Mutual Life Insurance Company agent about a combination life insurance-mortgage policy; and a French-Canadian teacher is borrowing $1800 in thirty-five minutes from the Bank of Nova Scotia.

2. Geographical references. Gage Envelopes headlines an ad in French "Fabriqué au Québec"; Dow Breweries, in an ad for Black Horse Ale, says, "Brassé à Montréal et à Québec"; and Kodak displays a picture of the Citadel in Quebec City instead, as in the English original, of the Parliament Building in Ottawa.

3. Language idioms and symbols. Labatt Breweries introduces a series of ads with "Dans la Belle Province"; Molson Breweries, for one of its beers, employs a traditional rooster symbol; dozens of companies seek identification through the expressions, "chez nous," and "les Québecois"; and such idioms as "ça bouge au Québec," "d'ac," or "le magasin à l'accent français" abound.

4. Current activities indicating progress. A few companies associate themselves with progressive economic developments. Moore Business Forms, for example, cites its factory in Quebec and displays photographs of French-Canadian company managers who use Moore products; and General Motors of Canada, when opening a new plant, headlines an ad "Ils ont construit les premières Québecoises."

5. Popular culture of Quebec. Quaker Oats Company, with appropriate advertising copy, introduces Capitaine Crouche as a French counterpart for Cap'n Crunch and a cereal, Tintin, modeled after a famed French-language cartoon character. Other companies refer to such popular leisure and sports activities as fishing, hockey, skiing, and snowmobiling.

All told, such advertisements with an ethnic identification make up but a minor proportion of French-language advertisements by national English companies. The percentage of commercials on two French-language radio stations in 1964 referring to Quebec or things French, omitting duplicated commercials, was but 6.6 percent, and in television stations 9.9 percent, but even such a low proportion means thousands of repetitions in the course of a year and, compared with the situation before the Quiet Revolution, represents an enormous increase.[4]

THE CASE OF KÉBEC

The hazards faced by English advertisers in attempting to adapt are strikingly shown in the incidents surrounding the launching of a new beer,

[4] By virtue of being English controlled, the companies were limited in the nationalist appeals they could use. They could not, as did one French-Canadian owned company, speak of "The only French-Canadian enterprise of automatic distributing machines," or say, as did a French-Canadian producer of cigarettes, that the particular brand name, "La Québecquoise," reflected the need to give French Canada a tobacco industry and to promote the economic, technical, and cultural expansion of "our people."

called Kébec, by Dow Breweries in 1963. The basic device of the campaign was tried and true—associate the product with a sentiment deeply felt and approved by the potential buyers, in this case the ethnic identity and nationalism of French Canadians. Citing ads in the newspaper *Le Devoir*, the campaign began with a teaser-type advertisement on November 6 reporting an announcement to follow and showing a bit of a symbol. In the following four days, advertisements continued to report the forthcoming announcement, with each succeeding advertisement presenting a bit more of the symbol On November 11 came the grand launching. On the top left side of a large advertisement was a portrait of Jean Talon, a hero of French-Canadian history. On the top right side were pictures and names of nine French-Canadian executives of Dow Breweries, including a vice-president who was also a member of the Board of Governors of the University of Montreal. In the lower right side was the new trademark, a design of a large beer bottle on which was the complete symbol, a stylized "K" and the name Kébec and, just to the left, a figure in the costume of the old French regime holding a flag which resembled that of the Province of Quebec. The cross and fleur-de-lis of the Quebec flag were replaced by a part of the "K" and a crown, the symbol of Dow Breweries. The copy of the advertisement reads as follows: "The management of Dow Breweries of Quebec presents to you La KÉBEC. A true beer expressing the taste of modern Quebec. Reflecting the image of the State of Quebec today, La Kébec is perpetuating in French Canada a centuries-old tradition of quality. The French Canadians who direct Dow Breweries of Quebec are to a degree the successors of the great Jean Talon, the illustrious governor of New France who was also the first director of a brewery in Canada. The vaults of the old brewery of the King form part of the inheritance of Dow Breweries of Quebec and the name we have chosen signifies the blending between the Quebec of today and the Quebec of our French origins. In Quebec . . . La Kébec."

The nationalistic overtones of the advertisement are evident. Kébec was the original Indian name given to the site chosen by Champlain for the capitol of New France and an old spelling of Quebec. Jean Talon was an honored historical figure after whom streets and hospitals were named. The advertisement mentions Quebec eight times and Kébec four times. The copy also speaks of "l'Etat du Québec," the term adopted by strong nationalists and separatists to suggest that Quebec deserved to be called a state in its own right. It was explicitly announced that the directors of Dow Breweries in Quebec were French Canadians, with no mention that the majority of shares were held by an English-Canadian company. And a final nationalistic touch was the trademark with its flag resembling that of Quebec.

Two days later another advertisement for Kébec appeared with a copy of a painting representing a dancing party at the governor's palace at the time of Jean Talon. The copy spoke of "Kébec" as a descendant of the beers brewed in New France by the great Jean Talon, of the French-Canadian directors of the company, and again displayed the trademark of the bottle and figure holding the flag.

But the very same day a storm broke. On page 3 of *Le Devoir* appeared a story in which the RIN, the Rassemblement pour l'Indépendance Nationale, the largest and best known of the separatist groups, accused Dow Breweries of scandalously exploiting the Quebec flag and insulting the Quebec population for commercial reasons. The company was referred to as the "Toronto Dow Breweries" and "Toronto capitalists," and was accused of replacing the fleur-de-lis by the crown, the very symbol of Quebec colonialism. RIN asked all "indépendantists" and all self-respecting French Canadians to boycott not only Kébec beer but all the products of the "Toronto Dow Breweries," and invited the provincial government to take all necessary measures to prevent the exploitation of national symbols for commercial ends.

The argument was taken up in the student newspaper at the French-language Université de Montréal. An open letter by two students addressed to the vice-president, who was a member of the University Board of Governors, spoke of their "stupefaction and profound disgust" at the treatment given the official flag of "l'Etat du Québec." Another student writer bitterly condemned the brewery for exploiting nationalism for commercial ends and for its "burlesque transformation" of the national flag.

On November 26, just two weeks and a day after the appearance of the first complete advertisement, the director of Dow's Public Relations Department announced that this campaign for Kébec beer was being withdrawn. But the company admitted no offense. The management, according to the release, had never intended to take advantage of sacred symbols; they were in fact, through the name Kébec, doing their part to help give the province its "visage français." They had sought a name and a presentation that was indisputably French Canadian.

This incident has several implications. First, this advertising campaign was not very different in tone or quality from many other contemporary campaigns in Quebec, but it did go further than others in adapting the flag and thus linking a sacred symbol with the "profane" aim of selling beer. Even more important, because Dow was controlled by an English-Canadian corporation, critics could claim that the whole campaign smacked of blatant and deliberate deception. Further, looking at the French-Canadian groups themselves, the lines of action were relatively easy to choose for separatists or others whose position was extreme. What better incident to draw attention to themselves and show that their interests lay on the side of the French-Canadian public versus the unscrupulous English-Canadian corporation! For those, however, who sought to tread a balance, acting on behalf of the Quiet Revolution presented complications. We have no reason to doubt that those French Canadians who launched Kébec beer, among their varied attitudes, did feel that they were contributing to the "visage français" of the province and the Quiet Revolution.

CONCLUSION

We may venture a further analysis of this incident in the context of the social structure and the mass society. The English directors and their

French-Canadian advisors approached their audience—as mass communicators generally do—as a collectivity of individuals responding to particular themes. The audience was diagnosed as French Canadian, potential beer purchasers or beer-purchase influencers, and imbued with a nationalist ideology. The campaign was appropriately developed. But, as we have seen, the diagnosis was inadequate and the campaign boomeranged. Wherein lies the blunder? The error, we suggest, was not in the interpretation of the ideology but rather in the image of the social structure.

A mass communicator, wittingly or otherwise, has some image of the social structure to which he directs his message. In the past, the English advertisers and their French-Canadian advisers took for granted the traditional image of the French-Canadian social structure, recognizing the superior position of the English and the power within the French-Canadian community of such groups as the church, political parties, and liberal professions. No ad would ever have threatened these significant groups. With the Quiet Revolution the social structure had obviously changed, but the significance of the change did not impinge on the English and French-Canadian communicators. They continued to take the social structure for granted and continued to view the effective audience as a group of isolated individuals responding to particular themes. For advertising of everyday products and services, this image was sufficiently relevant to be successful. However for this particular advertising campaign, in the changing emotional context of the Quiet Revolution, the image served badly. It ignored completely such new power groups as separatists, student activists, and liberal journalists who, in their power to gain attention in the mass media and mobilize forces, had assumed an importance probably superior to any other groups in the province.

The opportunity offered to the separatists and strong nationalists in this particular instance fitted nicely, as we have seen, into their own power and ideological struggle. It gave them an issue which enhanced their position and a target, the English companies, which could only, since they had to avoid controversy, retreat as quickly and gracefully as possible.

To what degree are the advertisers who wish to take advantage of French-Canadian symbols placed in an insoluble dilemma? Might any such symbol, in the current context, be considered commercial exploitation? The answer, as some of the earlier examples indicate, is not necessarily "yes"—testimonials, popular culture identifications, and numerous other devices have been successfully adopted. But these messages and devices have had precedents, have been more tempered in style, and have not so obviously given newly emergent power groups the opportunity for exploitation. The product, the ongoing patterns, and the ideology must of course be considered, but so too must the changing social structure.[5]

We may also seek to place our case material in the broader context of conflict and intergroup relations. In so doing, we find support for the follow-

[5] The significant research relating communication to social structure, aside from informal groupings, is meager indeed (Larsen 1964).

ing four propositions—proceeding from the less to the more hypothetical—which extend far beyond our study of advertising in French Canada as such.[6]

1. When the subordinate group does not threaten the dominant group, it is free, and in fact even encouraged, to express traditional aspects of its culture which, while serving important psychological and social functions, simultaneously reflect the group's subordinate position. Thus the French-Canadian advertising personnel before the Quiet Revolution met no opposition when they introduced folk symbols into their advertisements. Thus, too, the nonthreatening Indians and Eskimos are encouraged to develop their native arts, the southern Negroes to sing spirituals and folk songs, and immigrant groups to initiate language and folk-dance classes.

2. When the subordinate group gains sufficient power and will to pose a threat, the dominant group seeks to turn the subordinate group sentiments to its own benefit. In our study, the advertisers adapted French-Canadian nationalism. In other contexts, national American advertisers in Negro-oriented magazines cite testimonials from Negroes; corporations invite subdominant group members to take figurehead positions and some companies organize company unions with profit-sharing plans.

3. Conflict-oriented members of the subdominant group will seek to turn the arguments of the dominant group to their own advantage. Thus French-Canadian separatists argue that the English companies defile their sacred symbols. They affirm likewise that French-Canadian directorships in English-controlled companies more likely represent "window dressing" than a recognition of French-Canadian talent and influence. Similarly, militant students and labor leaders argue that invitations by officials and management to join committees are merely "tokenism" and attempts to turn aside legitimate grievances.

4. Those members of the subdominant group who simultaneously advise the dominant group and identify with their own group's aspirations seek to resolve resulting personal dilemmas by presenting different images to the two groups. The French-Canadian advisers in our case study argued to the English that they had a good campaign and to the French that they were contributing to the "visage français." The Negro, student, or labor liaison representative in other conflict situations may stress his militancy before one group and his statesmanship or spokesmanship role before the other.

In one sense, these propositions are illustrations from our data; in another, they are hypotheses to be tested wherever groups are in conflict and subdominant group intermediaries serve the dominant group.

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Social Change and Type of Marriage[1]

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The present paper is concerned with an examination of the effects of urbanization on the distribution of polygynous and monogamous arrangements. Its main object, however, is not to assess the overall magnitude of the changes exerted by urbanization along these lines, but rather to investigate how this magnitude varies with the characteristics of urban subpopulations investigated, both with their level of participation in modern structures as measured by length of residence in urban centers, educational and occupational achievement, and with their cultural traits, as specified by ethnic origin. The interaction between these two sets of variables is not alike for males and females. It is accordingly argued that urbanization changes not only the distribution of polygynous arrangements but also the recruitment patterns of the relevant categories of actors. Thus, the significance of the contrasts between monogamy and polygyny should be higher in urban than in rural areas.

Type of marriage is deemed to vary with societal complexity (Osmond 1965, pp. 8–15). More specifically, urbanization and industrialization are expected to alter traditional familial systems in the direction of some type of conjugal household (Goode 1963, p. 1). Accordingly, in Africa, these two forms of social change should be associated with a decline in both the incidence and the intensity of polygynous marriages.[2] The present paper evaluates the validity of this proposition by examining the distribution of plural marriage among distinctive segments of the Ivory Coast.

RELATIONSHIP BETWEEN MODERNIZATION AND THE DISTRIBUTION OF PLURAL MARRIAGE: A LONG-TERM PERSPECTIVE

Traditionally, polygynous arrangements have prevailed among African societies where extended kin groups exert a tight control over the behavior of their individual members. Since modernization is associated with a transfer of basic societal functions from familial institutions to specialized agencies, it should also modify patterns of marriage.

First, in the Ivory Coast, as elsewhere in Africa, modernization has been accompanied by the development of a cash economy and by a corresponding increase in the mobility of economic rights (Moore 1963, p. 102). With this growing individualization of the rights held in land, extended families

[1] This research has been financed by grant No. RO3-MU 13927-01 from the National Institute of Mental Health.

[2] The incidence of polygyny can be measured by (*a*) the number of polygynists per 100 married males, (*b*) the number of married women per 100 married men.

are increasingly unable to control the behavior of their individual members and, for example, to control the fulfillment of the obligations incumbent upon the heirs of a given testator. Accordingly, there should be a decline in the incidence of traditional forms of polygyny, such as levirate.[3]

Second, economic development has accelerated rates of occupational mobility. An increasing number of adult roles are learned in the context of modern educational and economic institutions with a corresponding decrease in the significance of the socialization functions carried through familial units.[4] As a consequence, traditional values should lose their initial salience and polygyny should cease to be uniformly normative.

Further, patterns of economic development have enhanced the volume and the range of migrations toward African urban centers. Since the population of such centers grows faster than their respective labor markets, individual migrants need to be highly mobile and hence cannot support many dependents. As a result, large families, including polygynous households, may become dysfunctional.[5] In addition, the number of economic opportunities offered to married women in urban centers remains limited. Although it is still a potential symbol of success, urban polygyny remains hardly instrumental in enhancing wealth. The corresponding decline in the functions of plural marriage should be paralleled by a decrease in its incidence.

Last, as achievement succeeds ascription as a mechanism for placement in occupational structures, familial actors experience new anxieties and frustrations, which should induce changes in familial functions. Acting as mechanisms of tension management, families should primarily mediate the release of emotions and strains accompanying participation in more specific economic and social structures (Pitts 1961, pp. 712–13). Polygynous marriages hardly facilitate the new style of familial interaction. Indeed, this new style requires (1) the number of familial actors to remain limited, and (2) mate selection to be governed by principles of social homogamy.[6]

[3] I.e., the obligation to marry the wife (or wives) of the deceased person.

[4] Indeed, there has been a decrease in the proportion of individuals engaged in subsistence agriculture and a simultaneous increase in the level of school enrollments. Both trends have been associated with a decline in the importance of the occupational and cognitive socialization functions of familiar groups.

[5] Of course, it can be argued that, at least in the short run, polygyny is functional by enabling the urban dweller to maintain contact with his village of origin, to keep one of his wives on the land, and, hence, to participate in both an urban and a rural economy. This assumption is upheld, and it has been suggested that whereas only 5 percent of the "first order" wives, mostly monogamous, live outside of town, this characterizes about 15 percent of junior co-wives (see Brass et al. 1968, p. 223).

[6] Of course these two requirements are subjected to discussion. Certain authors seem to indicate that the basic distinction between instrumental and social-emotional relations leads the triad to be a more significant social unit of interaction than the dyad (see Freilich 1964). In the experimental literature, it is also often proposed that the variety of emotional resources of a group (and hence its size) maximizes its cohesiveness. For a review of the equivocal evidences on this first point see chaps. 9 and 10 in Hare, Borgatta, and Bales (1965). For a definition of the functions and of the dimensions of homogamy

Due to the scarcity of eligible women in African urban areas, polygynous ırrangements entail increased contrasts in the age, ethnic, and social characteristics of conjugal partners. Thus, plural marriage is likely to satisfy only one type of complementary need pattern (father-daughter or Pygmalion model) which does not necessarily correspond to the diversified ınd equalitarian demands of urban actors.

THE DIFFERENTIAL RATES OF "NUCLEARIZATION" OF FAMILIAL INSTITUTIONS IN CONTEMPORARY AFRICA

Even if we assume that African polygyny is doomed to disappear, it is still necessary to evaluate the rate of decline of this institution and to determine, correspondingly, the sequence in which various African subgroups will orego plural marriage. We propose that this sequence is a function of (*A*) he erosive power of urbanization and modernization, and (*B*) the antecedent social structures from which populations originate.

A. CONFLICTING HYPOTHESES REGARDING THE EROSIVE POWER OF URBANIZATION

Given the fact that plural marriage is traditionally a privilege attached to ige and seniority, there are two conflicting hypotheses regarding the effects exerted by urbanization upon its distribution. According to one hypothesis, polygyny should decline as one moves from the least to the most modernized egments of the population. Participation in the most economically and ocially rewarding occupations, the modern sector of the economy, selecively characterizes individuals with a primary or post-primary education ınd, therefore, individuals derived from those ethnic and socioeconomic groups already exposed to modernizing influences (Clignet and Foster 966*a*, 1966*b*). Persons gaining access to new means and resources are expected to acquire simultaneously new ends and to aspire to a Western amilial life style.[7]

According to a second hypothesis, however, the relationship between nodernization and type of marriage should be curvilinear. Monogamy hould characterize only new immigrants into urban places and individuals placed at the bottom of the modern occupational hierarchy (unskilled nanual workers). Polygyny would be too costly an institution for this subpopulation in its new circumstances. Males enjoy limited resources while emales are almost entirely barred from the labor market.

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nd for a review of the theory of complementary needs see Winch (1964, part 6). The problem remains, however, to decide whether complementarity of psychological needs necessarily presupposes homogamy. In fact, it can be argued that the Pygmalion model f complementarity will operate best when reinforced by a significant age difference beween the two partners.

Monogamy, in this new context, becomes a rewarding end by itself in facilitating upard mobility and enhancing standards of life. For a full discussion of the new alternaives open to individuals, see Shevky and Bell (1955, p. 11).

Alternatively, the incidence of polygyny should be highest among both the most traditional and the most modernized individuals. Among the most traditional subsistence farmers, petty traders, and tribal leaders, rewards are still distributed along age lines and there are few alternative choices for familial life style. Elders continue to favor traditional amenities, including plural marriage; indeed polygyny is often instrumental in the attainment of their resources. Having more resources, the most modernized segments of the population have also more choices with regard to life style. They are nevertheless likely to maintain polygynous arrangements, insofar as their recruitment reflects the influence of age and seniority, and hence, the continuity of traditional orientations.[8]

In summary, the second hypothesis implies a clear distinction between modernization of means and modernization of ends (as suggested by Moore and Feldman 1960; and Aron 1967). Whereas the first hypothesis assumes that matrimonial status is mainly influenced by the origin of the resources allocated to the individual and by the amount of exposure to modern values, the second hypothesis views matrimonial status as merely determined by the amount of these resources. By the first hypothesis, the erosive power of modernization is deemed to have permanent and regularly increasing effects. According to the second hypothesis, this erosive power is perceived as temporary and selective.

B. CONFLICTING HYPOTHESES REGARDING THE VULNERABILITY OF ANTECEDENT SOCIAL STRUCTURES

Changes in the incidence of plural marriage depend upon both the intensity of modernizing forces and the vulnerability of traditional polygynous arrangements. In turn, variations in the vulnerability of these arrangements reflect variations in: (1) Initial degree of social integration. African peoples enjoy differing degrees of political, social, and religious cohesiveness and exert, therefore, uneven pressures toward conformity upon their individual members. (2) Initial salience of plural marriage. Initially, the incidence of polygyny varies along ethnic lines, and this incidence is high-

[8] In the early stages of colonization, it was undoubtedly the most marginal and the most deprived individuals who were pushed into educational institutions and were obliged to enter into the new occupations imposed by colonial authorities. In the Ivory Coast, as elsewhere in Africa, the first individuals to attend schools were the sons of slaves or of the junior segments of familial organizations. Traditional leaders perceived the learning of a ruling role as incompatible with the learning of Western specific skills (for a discussion of the relationships between schooling and traditional structures, see Foster 1964). This pattern disappeared later. In fact, our data suggest that in the Ivory Coast of today correlation between age and access to the top modern occupations is hardly negative; in Abidjan the proportion of males engaged in managerial activities or acting as industrialists is positively associated with age—no less than two-thirds of these persons are over forty years of age. Among wage earners, no less than 28 percent of technicians and supervisory personnel belong to this age group, as against only 20 percent of the skilled white-collar workers and 16 percent of their unskilled counterparts. Trends among manual wage earners are similar, and three-quarters of the skilled are under age forty as against no less than 90 percent of the unskilled.

est among African societies which follow virilocal rules of residence, allocate significant economic functions to women, and/or have a system of privileges transmitted along hereditary lines (Clignet in preparation). (3) The initial functions performed by plural marriage. Traditional polygyny may be perceived as a source or as a result of wealth or as both.

The problem remains to assess the effect of such variations upon present matrimonial choices. One can argue that rates of innovation in matrimonial behavior will be maximal among peoples where demands imposed initially upon familial actors are consistent with the requirements imposed by urbanization.[9] Yet, one can also expect these rates of innovation to be maximal whenever and wherever traditional and modern demands are perceived as mutually exclusive by migrants.

In effect, these two hypotheses reflect conflicting views on recruitment patterns of urban migrants. In the first case, the majority of urban dwellers are expected to come from the mainstream of peoples whose traditional life style favors rapid and easy adaptation to new conditions. In the second case, one expects this majority to originate from marginal segments of ethnic groups whose traditional organization is least compatible with participation in modernizing structures. These marginal segments have indeed the most to gain from an urban experience.

These hypotheses also reflect conflicting views on processes of familial innovation. In the first case, one assumes that the first urbanized individuals to adopt monogamy are likely to belong to peoples in which polygyny has never been a prime norm, has always involved limited segments of the population, and has served few functions. In the second case, one assumes conversely that the first urban dwellers to remain monogamous are those whose adaptation to an urban life style has necessitated a thoroughgoing transformation of norms and values Such individuals tend to be derived from peoples where polygyny was initially highly normative, frequent, and served a variety of purposes.

In short, the first hypothesis exclusively explains familial innovations in terms of the dominant traits of antecedent social structures while the second hypothesis attaches equal importance to the position occupied by individuals within such structures.

The vulnerability of traditional polygyny to modernizing forces depends also upon distance between the places of origin and of destination of migrants. It can be argued, however, that the cohesiveness of traditional groupings and therefore the normative character of plural marriage decreases with distance of migration. Yet, distance may also lead ethnic groups to remain "encapsulated" within the urban context and maintain the dominant features of their traditional organization (see Mayer 1961). Finally, this vulnerability depends on the relative isolation of peoples tested in the urban environment. The more residentially segregated they

[9] Thus, it can be argued that the risks and difficulties attached to the pursuit of animals are symbolically equivalent to the pursuit of industrial occupations. Hunters should therefore be particularly prone to adapt easily to an urban style of life (see Nimkoff and Middleton 1960).

are, the less exposed they are to new norms and values and the more their traditional organization will remain untouched.

THE CHOICE OF A TESTING GROUND

We have presented two pairs of competing hypotheses regarding the effects of modernizing forces on the incidence and the intensity of plural marriage. The testing of these hypotheses is possible in a country where there are marked variations: (*a*) in the relative exposure of subpopulations to modernizing forces and (*b*) in the traditional organization of its various ethnic components.

The Ivory Coast satisfies both requirements. Economic and social changes came first and have been most striking in the eastern part of the coastal zone. In fact, there are marked variations in the educational and occupational profiles of the various Ivory Coast subregions.[10] There are also contrasts in educational, occupational, and monetary resources among populations living in urban centers with differing sizes and functions or living in distinct neighborhoods of each city.

In addition, there are marked differences in the traditional organization of eastern and western ethnic groups The first set of peoples (including the Ebrie, the Adioukrou-Alladien cluster, and the Baoule) have a complex political organization, associated with a limitation of the domestic power invested in elders. Further, the matrilineal organization of these peoples (*a*) induces potential conflicts between the male members of a kin group and their male affines, (*b*) reduces the degree of social absorption of married women, and (*c*) limits incentives to contract plural marriage. In contrast, western peoples (including the Bete and the Malinke) have a gerontocratic social organization which reinforces the domestic power of elders (Paulme 1962; Kobben 1956). In addition they are patrilineal, and married women must perform a variety of obligations, particularly in the economic sphere.[11] Accordingly, the incidence of plural marriage is initially higher among these peoples than among their eastern counterparts.[12]

[10] In 1965, school enrollments at the primary level varied from over 75 percent in the southeastern sections of the country to less than 15 percent in the northwest. Similarly, there were marked discrepancies in the organization of farming; the number of foreign unskilled agricultural laborers varied between 80,000 for the eastern parts and 800 for the region of Odienne. At the same time, there were also variations in the relative importance of familiar sharecroppers used by farmers; this group represented only 11 percent of the active males in the east but two-thirds of that of the north. For a full discussion, see *Côte d'Ivoire* (1967).

[11] Contrasts between the differential effects of a matrilineal and a patrilineal organization on the incidence of plural marriage are derived from Schneider (1961). The concept of social absorption is borrowed from Fallers (1957).

[12] Another valid reason for investigating the Ivory Coast lies in the fact that the government has recently decided to issue a new civil code and to abolish polygynous institutions. Many congressmen and high officials are indeed convinced that the modernization of an African country requires drastic changes in the organization of domestic groups and in the familial status allocated to individual actors. But can innovations be brought forth by legal measures? Have these innovations better chances to be generalized when they

The testing of our two sets of competing hypotheses rests upon two distinctive strategies. First, we will compare the distribution of polygynous arrangements among cities of varying size. In the Ivory Coast, all urban centers were founded by Europeans, and their size reflects their relative exposure to modernizing forces. Since we assume plural marriage to be affected both by modernizing forces and cultural factors, we will compare the distributions of polygynous arrangements in Ivory Coast cities with their respective hinterlands.[13]

Yet the size of an urban center is only a gross indicator of its modernity. Hence we examine also variations in the distribution of plural marriage along ethnic and socioeconomic lines within the capital city, Abidjan. Differences among socioeconomic groups should reflect the influence exerted by exposure to modernizing forces, while differences among ethnic groups should be indicative of the role played by antecedent social structures.[14] Ecological correlations are used to assess the association between socioeconomic factors and polygyny. An inspection of cross tabulations involving individual responses will enable us to evaluate the effects of antecedent social structures and of their interaction with modernizing forces.

RESULTS

A. COMPARISONS BETWEEN CITIES BY VARYING SIZE

An inspection of table 1 shows that correlation between city size and proportions of males polygynously married is limited.[15] Further, and with

are initially most characteristic of the lowest segments of the population or when they prevail first among upper strata? Should the legal measures concerned with innovation be assorted with positive or negative reinforcements in order to have a maximal impact? It may very well be that laws regulating familial relations can sanction only the actual practices of the majority of citizens. An evaluation of the overall effects of modernization on type of marriage should enable us to assess whether the new law will be effective.

[13] For example, see *Côte d'Ivoire* (1967); *Supplément Trimestriel du Bulletin* (1966); and *Etude socio-économique* (1964).

[14] This second strategy is particularly appropriate to the pursuit of our objectives in view of the fact that the distribution of cities by size in the Ivory Coast is primate in nature and urban populations are therefore concentrated in one single urban center (for a discussion of primate distribution, see Berry 1961, pp. 573–88). Data used in the context of this second analysis are derived from the previously unpublished tapes of the Abidjan census of 1963. We are indebted to the Ivory Coast government for these tapes. Their use has required (*a*) transformation to BCD form, (*b*) extensive recoding to eliminate alphabetic codes, and (*c*) a complex recoding of categories in order to eliminate equivocality. For example, no distinction was originally made between codes for senior co-wives and single spouses. The census is a sample survey of one-fifth of the households included in Districts 20–89, predominantly populated by Africans, and of one-tenth of the households in Districts 00–16, where Europeans are in the majority. Cross tabulations used in the present study involve only African respondents derived from the first set of districts. In its present form, the tape is obtainable from the Center for Metropolitan Studies, Northwestern University.

[15] We have rejected here the classical indicator of polygyny (number of married women per 100 married males) for two reasons. First, to be valid this indicator necessitates a

the exception of the southeast region of the country, the incidence of polygyny does not appear to be lower in urban than in rural areas. It is more closely associated with the location than with the size of urban centers, and the effect of location in this respect suggests that the relationship between modernization and type of marriage is not independent of cultural factors. Moreover, the intensity of polygyny tends to be higher in cities than in their hinterlands. In the present African context, modernization may accentuate existing systems of stratification; many men use the resources derived from their participation in urban structures for acquiring additional wives and affirming the preeminent position that traditional standards enable them to claim.

TABLE 1

INCIDENCE AND INTENSITY OF POLYGYNY IN IVORY COAST CITIES AND THEIR RESPECTIVE HINTERLANDS*

City (i)	Size (ii)	Date of Census (iii)	Location (iv)	Incidence of Plural† Marriage (v) (%)		Intensity of Plural‡ Marriage (vi) (%)	
				Cities	Hinterlands	Cities	Hinterlands
Odienne	10,000	1966	Northwest	39	31	41	29
Agboville . .	12,292	1957	South	21	22	24	17
Daloa	18,140	1961	Center west	34	33	39	30
Gagnoa	19,539	1961	Center west	32	32	28	28
Grand Bassam	20,000	1963	Southeast	18	29	17	17
Korhogo	20,879	1968	North	27	31	44	22
Man	22,944	1961	West	37	37	39	37
Bouake	55,000	1960	Center	27	19	22	10
Abidjan.	246,000	1963	South	15	29	14	17

* For an examination of the sources of the information presented here, see footnote 22.
† Defined as the number of polygynous males per 100 married men.
‡ Defined as the proportion of polygynous males with more than two wives.

In brief, table 1 casts some doubt on the hypothesis according to which increased exposure to modernizing forces is conducive to an immediate decline in the incidence and intensity of plural marriage. Modernization of the means used by urban populations is not necessarily coterminous

sex ratio of 100 and an even representation of men and women in the universe where the measures of polygyny are taken. This condition is not fulfilled in urban areas, where, in addition, sex ratio varies along ethnic lines. As a result, the incidence of polygyny, as measured by this indicator, is often misleading. For example, it appears to be greater for the urbanized Baoule than for their Bete counterparts (175 versus 123), but this observation only reflects the greater migratory movement of the females from the former ethnic group. Second, this indicator is valid only insofar as males and females hold equally neutral attitudes toward matrimonial status. This neutrality cannot be taken for granted, and the use of this indicator would reveal that certain segments of the U.S. population are polygynous.

with modernization of their ends, that is, with a nuclearization of familial units. At the same time, regional variations in the distribution of urban polygyny support the hypothesis that the decline of polygyny is conditioned by antecedent social structures.

B. COMPARISONS AMONG ETHNIC AND SOCIOECONOMIC SUBPOPULATIONS OF THE CAPITAL CITY

1. The importance of demographic factors. The fast growth of Abidjan implies a large volume of migrations and hence: (*a*) A high sex ratio. Providing that mate selection takes place in Abidjan itself, a high sex ratio should diminish the incidence of poylgyny; our analysis shows a weak negative correlation with proportions of polygynist males across census tracts (−.14). Over time, the sex ratio of Abidjan has, however, declined, and this decline might facilitate the persistence of polygynous arrangements.[16] (*b*) A high proportion of single males. Since these are younger men, their number should not necessarily lower the incidence of plural marriage. Correlation between the proportions of single and polygynous males across census tracts is weak (.05). Over time, the relative number of single men in Abidjan has declined, which might limit the persistence of plural marriage. (*c*) A low proportion of single women. The number of single women present in Abidjan reflects their lack of geographic mobility and their ability to break down limitations to which they are traditionally subjected. Correlation between the proportions of single women and polygynous males across census tracts is accordingly negative (−.18). Over time, the number of single women is likely to increase, while the selectivity of their recruitment should diminish. Correspondingly, the resistance of single women to polygynous marriages might decline and there could be a reversal in the direction of the association between proportions of polygynous males and of single women.

2. The influence of exposure to modernizing forces. Urban, educational, and occupational experiences are used here as indicators of exposure to modernizing forces. Ecological correlations between the incidence of plural marriage and these various indicators were computed for the entire city, for subareas characterized by maximal social rank (i.e., by highest educational and occupational scores), and for subareas characterized by minimal social rank[17] (see table 2). First, all correlations are low, which indicates that modernizing forces exert no linear influence on plural marriage. Also,

[16] These results have been obtained from an analysis analogous to that suggested by Shevky and Bell (1955). We have considered here the 300 basic subareas of Abidjan, having a population large enough to support this type of analysis.

[17] Social rank scores are obtained by averaging the standardized proportions of adult individuals with a primary or post-primary education on the one hand, and those engaged in non-manual occupations on the other. Having normalized the distribution of scores on a continuum between 0 and 100, we have retained the forty-seven census tracts with the lowest scores and the forty-seven tracts with the highest scores. For a discussion of the method by which this normalization is made see Shevky and Bell (1955, p. 118). See also Clignet and Sween (1969).

as we will demonstrate in later pages, the low value of the observed correlations results from intervening ethnic variables.

Second, the direction of the association between social rank and incidence of polygyny seems to uphold the validity of the functionalist hypothesis namely that the persistence of polygyny depends more on the magnitude than on the origin of the resources allocated to the males. In contrast, the

TABLE 2

ECOLOGICAL CORRELATIONS OF SOCIAL RANK AND MIGRANT STATUS WITH PLURAL MARRIAGE

Characteristic	Entire City (N = 300)	High Social Rank Areas (N = 47)	Low Social Rank Areas (N = 47)
Indicators of Social Rank			
Males:			
Education (% individuals with a primary education and more)	010	.014	−.034
Occupation (% individuals engaged in nonmanual occupations)	.095	.084	.026
Public employment	.155	.113	.220
Ownership	013	−.098	−.052
Females:			
Education (% individuals with a primary education and more)	−.109	−.234	.057
Occupation (% individuals engaged in nonmanual occupations)	.060	.037	−.137
Public employment	−.014	−.003	.043
Indicators of Migrant Status			
Length of residence (% migrants with 10 years or more of residence in Abidjan)	−.048	.008	−.159
Nonmigrant males (% males born in Abidjan)	−.108	.155	−.263
Nonmigrant females (% females born in Abidjan)	−.111	.103	−.271
Nonmigrant females (% females born in Ivory Coast)	−.050	−.087	−.296

NOTE.—Information for 300 subareas of Abidjan (1963).

proportions of women entering polygynous marriages seem to decrease with their exposure to social change, as measured by their education, their participation in government agencies, and the length of their residence in Abidjan. Thus, the effects of social change on the matrimonial status of the two sexes are opposite.

Third, increase in social rank is apparently associated with: (*a*) Decreases in constraints upon matrimonial choice. Among populations of low social rank, polygynous aspirations can only be fulfilled after the satisfaction of

more basic needs. Whereas ecological correlations between plural marriage and educational, occupational, or urban experiences are negative or weak among low social rank populations, these correlations are positive or tend to be higher among subareas with high social rank. (*b*) Variations in the purposes served by plural marriage. Among low social rank areas, the correlation between proportions of polygynist males and of active women is positive (.17), but is negative for high social ranking areas (−.31). In the first instance, polygynous males tend to have economically active wives. These additional wives are still additional assets, but in the second situation they are only symbols of the status achieved by their husband and are additional liabilities. (*c*) Changes in value systems. Correlation between the proportions of polygynous males and of civil servants declines as one moves away from low social rank areas. In the first sort of area, civil servants have higher resources than the population at large but have maintained traditional familial values and orientations. Among the latter subpopulations, individuals employed by the government represent a minority of highly educated individuals who have adopted European norms and aspirations.

3. The influence of antecedent social structures. We now turn our attention to an evaluation of the assumptions concerning the influence of antecedent social structures upon the distribution of polygyny within urban environments (see table 3). In rural areas, the incidence of polygyny is higher among patrilineal peoples (such as the Bete or Malinke) than among matrilineal societies (such as the Alladien, the Ebrie, or the Baoule).[18]

Although urbanization is uniformly accompanied by a decline in the incidence of polygyny, urban-rural contrasts in the distribution of polygyny are not of the same magnitude for every ethnic group. Thus, the incidence of plural marriage declines more markedly among the urbanized Malinke than their Ebrie or Adioukrou counterparts. Malinke migrants whose natural habitat is located farther away from the capital city have a higher sex ratio and may face more difficulties to maintain polygynous arrangements. Yet, urban-rural differentials in the distribution of polygyny are quite alike for the Baoule and the Bete in spite of their differing types of descent and patterns of female migration.

Although the intensity of polygyny is uniformly lower in Abidjan than in rural areas, the extent of this decline again varies along ethnic lines; it is particularly marked among the Ebrie and the Adioukrou, whose global exposure to modernizing forces is maximal. In their case, urbanization is definitely associated with an erosion of traditional status hierarchies and with a decline in the significance attached to the number of wives as an indicator of social position. In short, the persistence or the decline of plural

[18] The norms pertaining to age of women at marriage are also an important factor in the incidence of polygyny. Polygyny is generally higher among ethnic groups who favor early marriage. Thus, in the hinterland, 63 percent of the Baoule married women were married before seventeen years of age, against 67 percent of their Bete counterparts. But among the Malinke of Odienne, the corresponding proportion exceeds 79 percent (see *Côte d'Ivoire* 1967, p. 118).

TABLE 3

ETHNIC DISTRIBUTIONS OF PLURAL MARRIAGE IN RURAL AREAS AND IN ABIDJAN

Ethnic Group	Type of Descent	Geographic Location	Population* Hinterland‖	Population* Abidjan#	Sex Ratio† Hinterland‖	Sex Ratio† Abidjan#	Intensity of Plural Marriage‡ (%) Hinterland‖	Intensity of Plural Marriage‡ (%) Abidjan#	Incidence of Plural Marriage§ (%) Hinterland‖	Incidence of Plural Marriage§ (%) Abidjan#
Ebrie	Matrilineal	Southeast	105,000	10,545	99	110	18	7	22	14
Adioukrou, Alladien	Matrilineal			5,270		139		6		16
Baoule	Matrilineal	Center	684,000	15,495	95	76	18	11	25	14
Bete	Patrilineal	West	280,000	9,855	97	130	32	17	38	19
Malinke, Voltaic**	Patrilineal	North	980,000	53,190	100	183	24	14	27	14
African Foreigners††	Mixed	....	n.a.	16,000	n.a.‡‡	117	n.a.‡‡	12	n.a.‡‡	17
Total population	....	....	3,290,000	245,000	101	137	26	14	29	14

* Derived from *Côte d'Ivoire 1965*, p. 188, table 1.

† Computed for the adult population only.

‡ As measured by the proportion of men polygynously married.

§ As measured by the proportion of polygynous men with more than two wives.

‖ Derived from *Supplément Trimestriel du Bulletin Mensuel de Statistiques*, although ethnic data are treated by aggregates and do not give specific information about the groups studied here.

\# Derived from the previously unpublished tapes of the Abidjan census 1963 (Districts 20–89).

** Include Senofo and Lobi.

†† Include peoples from Ghana, Nigeria, Dahomey, and generally from countries located south of the Ivory Coast.

‡‡ Figures not ascertained.

marriage of Abidjan is affected by specific cultural factors (see table 4). The influence of these cultural factors is evidenced through an examination of the association between age and matrimonial status among the Abidjan male adult population. To be sure, older male residents of the capital city are uniformly more likely than their junior counterparts to be polygynous. Yet the intensity and the direction of the effects exerted by age in this respect are not alike for all ethnic groups considered here.

TABLE 4

PROPORTIONS OF ABIDJAN MALE RESIDENTS WHO ARE POLYGYNOUSLY MARRIED, BY ETHNIC AFFILIATIONS AND AGE CHARACTERISTICS*

(%)

	Ebrie	Adiou-krou	Baoule	Bete	Malinke-Voltaic	African Foreign-ers	Total Popula-tion Abidjan
Age:							
20–29	5	8	6	12	5	9	7
30–39	10	18	16	21	13	20	15
40–44	17	18	24	25	22	28	23
45–49	20	29	21	33	26	29	25
Above 50	9	35	9	38	28	19	22
Total married population	(649)	(293)	(592)	(532)	(3121)	(853)	(7623)
χ^2	31.7	32.2	41 4	32.8	210.1	51.6	....
Level of significance†	.01	.01	.01	.01	.001	.001	....

* Computed from the previously unpublished tapes of the Abidjan census 1963 (Districts 20–89).

† The χ^2 computation for each one of the six ethnic groups presented here involves eight age categories (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, above 55) and three categories of matrimonial status (monogamous, polygynous with two wives, polygynous with three wives), yielding 14 d.f. Levels of significance were established on the basis of these tables. However, only the proportions of polygynous males in each ethnic group are presented above.

Minimal for younger age groups, interethnic differences increase as one moves toward older ages; for example, 70 percent of the Bete forty-five years old and over are polygynous against only 30 percent of the Baoule males of similar age. These ethnic contrasts appear to be somewhat parallel to those observed in the hinterland.[19] Yet, they do not seem to reflect

[19] In the rural sections of the north, the gradient of the association between age and plural marriage is very steep. The number of married women per 100 men does not exceed 115 for the individuals thirty-five years of age but reaches 150 among persons fifty-five years old. In Korhogo, the corresponding figures are 131 and 190. In the western region, this number varies between 125 and 150 for the equivalent age groups, but it varies between 144 and 188 in the city of Man. Urbanization minimizes the preeminence of elders and facilitates the access of younger cohorts to plural marriage. In southern cities, the gradient of the association between age and polygyny is far less steep. In Dabou, Bassam, and Abidjan, the index of polygyny varies between 115 for the thirty-five-year age group and 130 for those who are fifty-five years old. Further, especially in Abidjan, there is a decline of this index for older groups (see *Côte d'Ivoire* 1967, figs. 21 and 22).

variations in the sex ratio or in the migration distance of the various groups present in Abidjan. Thus, relationships between age and plural marriage are alike for the Adioukrou and the Bete, although these two groups have differing traditional organizations, are not located at similar distance from the capital city, and do not reach similar social rank scores. In short, association between age and plural marriage remains equivocal. Does the higher incidence of plural marriage among certain older groups reflect the persistence of the privileges attached to seniority or does it alternatively result from the lower exposure of older generations to European norms and values? Younger peoples are also more modern and hence more likely to abandon traditional symbols of success and status, including plural marriage.

An examination of the age distribution of women with differing matrimonial status gives us a partial answer to this query (see table 5). Thus, in Abidjan both junior co-wives in polygynous households and single spouses are recruited from younger age groups. In 1963, monogamy was still temporary; as women got older, their husbands were likely to have more resources and to marry one or several additional co-wives.[20]

Yet, differences in the ages of monogamous spouses, senior, and junior co-wives vary along ethnic lines. Largest for the Bete or for the Malinke, differences are slight among the Ebrie. Recruitment into Ebrie monogamous or polygynous families seems to be independent of the age of the woman investigated. Among this particular people, monogamy is apparently no longer a temporary matrimonial condition but rather the result of a deliberate choice. The problem remains to identify the determinants of such a choice.

We have argued that the persistence of ethnic differences in the distribution of plural marriage among urbanized populations reflects specific aspects of traditional structures. This point is further substantiated by the lack of association between religious affiliation and the incidence of plural marriage within ethnic categories.[21] Although the incidence of plural mar-

[20] The problem remains to determine whether the large age differentials among spouses of a differing rank order impedes or facilitates domestic conflicts. On the one hand, it can be argued that such differentials remove competitive feelings among co-wives and introduce some complementarity in domestic roles. Alternatively, it might be suggested that such differentials introduce inconsistencies in roles and accentuate jealousies and rivalries among members of the familial group. This second argument can be derived from the theory expressed by Aberle et al. (1963). Substantial age differences between co-wives induce incompatibilities and conflicts between their roles; antagonisms are enhanced by similarity in the ages of the newest spouse and of the children of the senior co-wife.

[21] In contrast to Abidjan, results obtained in Dakar in 1955 show significant differences between the matrimonial status of males with differing religious affiliations. In Dakar, no less than 96 percent of Christians but only 80 percent of Muslims are monogamous. Further, there are marked variations among Muslim sects; for instance, the *Layenne* are more frequently polygynist than the *Quadrienne* (29 percent against 14 percent). (See *Recensement Demographique de Dakar* 1958, p. 78.) Thus, it is not sufficient to analyze the effects of religious influences. It is equally important to evaluate the time during which these influences have been exerted and this may explain the heavier impact of Christian values in Senegal than in the Ivory Coast.

TABLE 5

Percentage Distribution of Age, Single Spouses, Senior, and Junior Co-wives in Abidjan, by Ethnic Origin*

	Ebrie			Adioukrou			Baoule			Bete			Malinke-Voltaic			Foreigners			Total Population of Abidjan		
	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)	(1)	(2)	(3)
Age group:																					
Below 25.	34	26	43	49	28	47	50	30	49	62	38	60	56	37	56	46	27	54	51	29	54
25–34....	40	43	33	42	49	44	38	56	41	33	53	34	35	45	33	41	53	33	37	48	35
35–44. ..	17	23	20	9	21	5	9	12	10	4	7	6	8	12	8	11	16	11	9	18	7
45 and above..	9	8	4	...	2	4	3	2	0	1	2	0	1	6	3	2	4	2	3	5	4
Total..	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
N†....	(519)	(65)	(54)	(219)	(47)	(32)	(729)	(115)	(121)	(355)	(106)	(107)	(2287)	(427)	(435)	(611)	(148)	(144)	(5812)	(1152)	(1136)
χ^2.....	24.1			16.4			18.1			16.7			135.5			32.8					
Level of significance	N.S.			N.S.			N.S.			N.S.			.001			.05					

Note.—(1) = Monogamous wives; (2) = senior co-wives; (3) = junior co-wives.

* Computed from the unpublished tapes of the Abidjan census 1963 (Districts 20–89).

† The χ^2 computation for each one of the six ethnic groups presented here involves eight age categories (20–24, 25–29, 30–34, 35–39, 40–44, 45–49, 50–54, 55 and above) and four categories of matrimonial status (single spouses, senior co-wives, second co-wives, and other co-wives), yielding 21 d.f. Levels of significance were established on the basis of these tables.

riage tends to be lower among Catholics and Protestants, differences between these two denominational groups and Muslims or Animists are not statistically significant, except among the Malinke where the two latter religious groups are in the majority. Further, as table 6 shows, interethnic differences remain quite large when religious affiliations are held constant. In spite of a similarly low incidence of Islam among the Bete and the Baoule, the proportion of Muslim polygynous males is twice as large among the former as among the latter. Conversely, whereas 84 percent of the Bete are Catholic as against only 11 percent of the Malinke-Voltaic, the incidence of polygyny is higher among the Catholics of the former than

TABLE 6

PROPORTIONS OF ABIDJAN MALE RESIDENTS WHO ARE POLYGYNOUSLY MARRIED BY ETHNIC AND RELIGIOUS AFFILIATIONS*

(%)

	Ebrie	Adiou-krou	Baoule	Bete	Malinke-Voltaic	African Foreigners	Abidjan
Religion:							
Animist	†	†	13	30	13	21	17
Muslim	33	†	13	25	16	22	16
Catholic	8	14	14	18	5	13	13
Protestant	11	21	8	23	6	15	
Harrist‡	15	†	13	†	†	13	13
Total married population	(673)	(302)	(609)	(1065)	(3486)	(870)	(7151)
χ^2	8.6	10.2	2.5	13.8	34.1	12.1	...
Level of significance§	N.S.	N.S.	N.S.	N.S.	.001	N.S.	....

* Computed from the unpublished tapes of the Abidjan census 1963 (Districts 20–89).

† Absolute numbers too small to be analyzed

‡ Syncretic cult: for further details, see Holas 1954.

§ The χ^2 computation for each one of the six ethnic groups presented here involves seven religious categories (Catholic, Protestant, Muslim, Animist, Harrist, others, without religion) and the already mentioned three categories of matrimonial status, yielding 12 d.f. Levels of significance were established on the basis of these tables. However, only the proportions of polygynous males in each ethnic group are presented here.

among those of the latter people. In brief, the influence exerted by religious values upon the matrimonial status of African male individuals remains limited and is probably modified by other aspects of traditional organization.

Religion exerts a greater influence on the matrimonial status of the female residents of Abidjan. Junior co-wives tend to be more frequently Animist or Muslim than senior co-wives or single spouses. Among the Bete, only 72 percent of the junior co-wives are Christian against 84 percent of the senior co-wives and 86 percent of the spouses of monogamous husbands. Among the African foreigners, the corresponding figures are 36, 41, and 51 percent, respectively. However, this profile differs somewhat from that observable among the Malinke where 13 percent of the monogamous wives

are Christian against only 4 percent of both junior and senior co-wives. Thus, in one case religion differentiates between the matrimonial rank of married women; in the other, it differentiates between the type of marriage the women enter.

In summary, this section has enabled us to partially assess the influence of the traditional social structure from which urban migrants are derived. To be sure, interethnic differences are more limited in an urban than in a rural environment. Yet, even in Abidjan, the influences of age, seniority, and religion on polygyny were seen to vary with ethnicity. It has been, however, impossible to evaluate the relative effect of: (*a*) the traditional political and familial organization of the peoples investigated, (*b*) the distance between their natural location and the capital city, and (*c*) their overall level of modernization.[22] It is possible that these factors interact in a specific way for each ethnic group analyzed.

4. Interaction between exposure to modernizing forces and antecedent structures. An examination of the influence exerted by urban educational and occupational experiences on the matrimonial behavior of the Abidjan male population confirms the view that the effects of modernizing forces vary along ethnic lines. Thus, although the incidence of plural marriage among males increases regularly with the amount of time spent in Abidjan (see table 7), the gradient of the association is steeper among the Bete than among the Baoule.[23] Conversely, there are no differences in this respect between the Adioukrou and the Malinke in spite of their economic, social, and political dissimilarities. Although individuals born in Abidjan are usually unlikely to be polygynously married, Ebrie and Baoule individuals born in the capital city display a higher incidence of polygyny than migrants of the same background.

The association between education and plural marriage is limited and curvilinear.[24] Up to a certain point, formal schooling appears to mediate new economic opportunities without changing familial aspirations. Beyond this point, both occupational and familial orientations are altered.[25] Yet, there are marked ethnic variations (see table 8). Indeed, interethnic dif-

[22] This sort of analysis has been made impossible by the fact that the present technology limits the number of dimensions to be examined in cross tabulations.

[23] Of course, it should be remembered that the amount of time spent in Abidjan varies both with age and ethnic origin.

[24] Divergences between the results presented in tables 2 and 8 are noteworthy. The first type of analysis deals with aggregates whereas the second deals with individual cases. For a discussion of the problems raised by the use of aggregates see Selvin (1961) and Robinson (1961, pp. 132–50).

[25] There is unfortunately no available account of the motivations currently underlying polygyny in the Ivory Coast. In Senegal, an examination of attitudes toward plural marriage shows that positive orientations are more frequent among men than among women, more frequent among illiterates than among persons having attended school. Among the latter, polygyny is most frequently justified by incorrect perceptions concerning sex ratio and by the notion that men should teach as many women as possible. Negative attitudes among both educated men and women result from the fact that plural marriage prevents intense emotional exchanges between partners (see Thore 1964).

TABLE 7

PROPORTIONS OF ABIDJAN MALE RESIDENTS WHO ARE POLYGYNOUSLY MARRIED, BY ETHNIC ORIGIN AND LENGTH OF RESIDENCE IN ABIDJAN*

(%)

	Ebrie	Adiou-krou	Baoule	Bete	Malinke-Voltaic	African For-eigners	Abid-jan
Length of residence:							
Less than 1 year	4	7	11	9	8	6	8
1 to 5 years...	9	16	9	18	11	15	13
6 to 10 years..	10	11	9	15	15	17	12
More than 10 years.......	10	24	18	26	21	25	21
Born in Abidjan	11	11	26	19	12	7	11
Total married population.....	(674)	(300)	(607)	(542)	(3121)	(868)	(7654)
χ^2..........	4.5	18.0	18.1	28.0	90.3	36.8	....
Level of significance†...	N.S.	N.S.	N.S.	.05	.001	.01	....

* Computed from the previously unpublished tapes of the Abidjan census 1963 (Districts 20–89).

† The χ^2 computation for each one of the six ethnic groups presented here involves nine categories of length of residence (less than 1 year, 1–2 years, 2–4 years, 4–5 years, 5–7 years, 8–10 years, 11–20 years, more than 20 years, and born in Abidjan) and the three matrimonial categories already mentioned, yielding 16 d.f. Levels of significance were established on the basis of these tables. However, only the proportions of polygynous males in each ethnic group are presented here.

TABLE 8

PROPORTIONS OF ABIDJAN MALE RESIDENTS WHO ARE POLYGYNOUSLY MARRIED BY ETHNIC AND EDUCATIONAL CHARACTERISTICS*

(%)

	Ebrie	Adiou-krou	Baoule	Bete	Malinke-Voltaic	African For-eigners	Abid-jan
Level of education:							
Do not speak French	6	13	13	4	10	12	10
Speak French......	10	16	13	15	14	22	15
Some primary studies.............	13	14	13	25	17	19	18
Completed primary studies..........	8	21	18	20	20	8	15
Went beyond primary studies	11	7	7	25	21	18	13
Total married population....	(674)	(301)	(610)	(540)	(3111)	(866)	(7685)
χ^2.............	6.9	21.8	25.1	21.8	24.2	26.9	....
Level of significance†........	N.S.	.10	.05	.10	.05	.02	....

* Computed from the unpublished tapes of the Abidjan census 1963 (Districts 20–89).

† The χ^2 computation for each one of the six ethnic groups presented here involves eight educational categories (post-primary experiences include groups of individuals having (1) not completed their first cycles of post-primary studies, (2) having achieved this cycle, (3) having completed their secondary studies, and (4) having gone to the university) and the three matrimonial categories already mentioned, yielding 14 d.f. Levels of significance were established on the basis of these tables. However, only the proportions of polygynous males in each ethnic group are presented here.

ferences, minimal among individuals who have no education, are greatest among highest educational categories. A higher level of education widens choices in life style and enhances the significance of ethnic differentiation; it tends to favor polygyny among patrilineal societies (Bete, Malinke) but has an opposite effect on matrilineal peoples (Adioukrou, Baoule).

Table 9 confirms the view that the incidence of plural marriage is more closely associated with variations in the resources acquired by occupational groups than with variations in the respective value systems. Both for the Ivory Coast as a whole and for Abidjan, the incidence of polygyny follows a curvilinear pattern and is minimal among manual workers whose exposure to modernizing forces, while exceeding that of farmers and of artisans, is still more limited than that of individuals engaged in non-manual occupations. Further, both among manual and white-collar workers, interethnic differences increase with skill level. Like educational experience, higher occupational status widens the choices in life style but does not necessarily reduce the influence of cultural factors. As indicated earlier, the extent to which modernization of means and modernization of ends are coterminous varies along ethnic lines.

Yet, the persistence of polygyny in African urban environments depends not only upon the type of experience acquired by male migrants but also upon the response of females to the challenges of an urban society. A long exposure of African women to the urban milieu does not necessarily predispose them to monogamy. Among all ethnic groups, senior co-wives are more likely than either their junior counterparts or single spouses to have spent more than ten years in the capital city. Yet once again, there are ethnic cleavages in this respect. Length of urban experience is an appropriate predictor of the matrimonial rank of Adioukrou, Baoule, and Bete women but predicts best the type of marriage entered into by Malinke-Voltaic or other foreign women.[26] The matrimonial behavior of women born in Abidjan also varies along ethnic lines. Both Ebrie and Bete women born in Abidjan are most likely to be monogamous. Conversely Adioukrou and Malinke women born in Abidjan tend most frequently to belong to polygynous families.[27]

The effects of schooling on the matrimonial status of women are similarly differentiated. Among certain peoples, such as the Ebrie, there are no educational differences between women married to monogamous males and those married to polygynists. In contrast, a little over one-half of both Bete monogamous spouses and senior co-wives can at least speak French, against only 36 percent of the third or fourth wives of their husbands. In this particular case, the domestic power traditionally accorded to senior

[26] For example, 32 percent of Adioukrou single spouses and senior co-wives have spent more than ten years in Abidjan against only 16 percent of the junior co-wives. In contrast, only 15 percent of Malinke single spouses have lived more than ten years in that city against 27 percent of their counterparts married into polygynous families.

[27] Thus 52 percent of Ebrie single spouses born in Abidjan against 65 percent of the women are married to polygynists. For the Adioukrou, the corresponding figures are respectively 3 and 8 percent.

TABLE 9

Proportion of Abidjan Male Residents Who Are Polygynously Married by Occupational and Ethnic Characteristics

	Ebrie	Adioukrou	Baoule	Bete	Malinke-Voltaic	African Foreigners	Abidjan	Hinterland
Occupational status:								
Unemployed	0	0	8	11	16	0	10	21
Farmers and fishermen	0	†	†	†	17	10	12	35
Artisans and traders	13	†	8	0	22	21	20	28
Manual workers:								
Unskilled	11	0	7	10	8	11	10 }	
Semi-skilled	2	13	10	22	15	17	13 }	21
Skilled	3	22	15	29	8	0	12 }	
White collar:								
Semi- and unskilled	0	10	11	23	19	0	13 }	36
Skilled	6	14	6	30	27	13	18 }	
Managerial, professionals	10	18	17	19	18	14	17	28
Military and uniformed services	29	33	22	38	27	0	29	..
Total married population (N_1)	(672)	(298)	(604)	(667)	(3093)	(862)	(7685)	..
Total married population (N_2)	(194)	(79)	(205)	(162)	(948)	(233)	(2191)	..
χ^2 1	24 7	19.4	32.5	5.4	107.6	36.4	....	..
Level of significance	N.S.	N.S.	.05	N.S.	.001	.02	....	..
χ^2 2	73.5	10.4	17 5	16.5	96.4	20.7	....	..
Level of significance	.001	N.S.	N.S.	N.S.	.001	N.S.	....	..

* Computed from the unpublished tapes of the Abidjan census 1963 (Districts 20–89). The figures for unemployed individuals have been obtained from the *total* number of respondents interviewed. Other figures have been obtained from a sample of one-tenth of the respondents.

† Absolute numbers too small to be analysed.

co-wives is important enough to enhance the attractiveness of this particular position (Dunglas 1939). Indeed, a high educational level should enable senior co-wives to increase the demands that their seniority and their age entitles them to impose upon the junior spouses of their husbands. Thus both achievement and ascription appear to influence the Bete familial hierarchy. Finally, among other peoples, such as African foreigners, education introduces significant distinctions between women married into monogamous and polygynous families. In this particular case, one-third of monogamous wives can speak French, against only 21 percent of their counterparts belonging to polygynous households.

In short, we can see that an increased exposure of the female population to modernizing forces is not uniformly conducive to a decline in plural marriage. The effects of exposure have to be evaluated in terms of: (*a*) The sex ratio of the ethnic groups investigated. The scarcity of eligible women influences their matrimonial choices and, for example, their preference for becoming senior co-wife instead of divorcing and contracting a new monogamous marriage. (*b*) The discrepancy between the two sexes in exposure to modernizing forces. As such a discrepancy declines, those women who are most "modernized" may lose the attractiveness they derive from their scarcity, and hence lose their bargaining power. (*c*) The persistence of traditional norms regarding the feasibility of plural marriage as an indicator of the social position achieved by a male individual.

CONCLUSIONS AND SUMMARY

The aim in the present paper was to determine the degree to which modernizing forces foster the emergence of a conjugal type of nuclear family and hence are associated with a decline in the incidence of polygyny.

The two main indicators that we have used yield similar results. First, the decline of polygyny in urban centers is determined less by the size of such centers than by their locations; urban rural differentials are less sizable than contrasts between regions of the Ivory Coast. Similarly, it is not necessarily among the most "modern" residents of Abidjan that the incidence of polygyny is lowest.

This had led us to suspect that while urbanization and modernization do change the values and norms of African individuals, they influence even more markedly the individuals' resources, and enlarge their choices with regard to life style. Since the decline of polygyny results from the absence of alternative solutions as well as from the acceptance of a European familial ideology, it can reflect an absence of means as well as a change in ends. These changes in familial ends vary along ethnic lines. Thus, we have demonstrated that the magnitude of ethnic differences in the incidence of plural marriage increases with the modernization level of urban subpopulations. We have tried, unsuccessfully, to isolate the factors which may account for the variability of the choices made by ethnic groups. There is probably a specific interaction among the traditional organization, the overall involvement in modern structures, and the natural location of these various peoples.

Insofar as the persistence of polygyny may reflect the persistence of traditional values among urban residents, it is important to determine whether modernization affects both sexes alike. We have suggested that exposure to modernizing forces may differentiate married women either in terms of their matrimonial rank or in terms of the type of marriage that they have contracted. In fact, their own matrimonial choices depend upon: (*a*) their individual status, (*b*) the relative scarcity of their peers within the field of eligibles, and (*c*) the matrimonial aspirations of the male population.

To sum up, at least in the short term modernization affects recruitment patterns of monogamous and polygynous actors as much as the distribution of the corresponding types of marriage. So far, it has been customary to oppose monogamy and polygyny as if the requirements imposed upon the corresponding familial groups were uniformly dissimilar. Yet, as various ethnic and socioeconomic subgroups adopt distinctive attitudes about plural marriage, and as recruitment patterns of polygynous actors vary both within and without ethnic groups, this assumption should be increasingly problematic. Variations in the organization of the polygynous households themselves should be as significant as relevant contrasts between such families and their monogamous counterparts.

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Commentary and Debate

JAN LOUBSER REPLIES TO ANSELM STRAUSS'S CRITICISM OF HIS REVIEW OF *DISCOVERY OF GROUNDED THEORY*

Anselm Strauss's comment on my review of his and Glaser's book is so nonspecific, devoid of intellectual content, and *ad hominem* that I find it difficult to respond to it. How does one counter a blanket charge that you misread and misinterpreted a book? If such a comment is appropriate at all, surely the burden is on the author to produce evidence in support of the allegations he makes. Although the alleged "facts" might by now be so well "grounded" for him that he assumes their validity for everyone else, they might not be so obvious to most readers.

In any event, an attempt to discredit the professional integrity and competence of a reviewer hardly clarifies any issues and does not contribute to an intelligent and civil exchange of ideas. I am prepared to defend my interpretation of the book and to discuss any substantive points Strauss may wish to raise.

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ALEX INKELES COMMENTS ON JOHN STEPHENSON'S "IS EVERYONE GOING MODERN?"

In my estimation John P. Stephenson has made a contribution to the measurement of attitudinal modernity in his paper "Is Fveryone Going Modern?" (Stephenson 1968). In the course of doing so, however, he enunciates some *principles* for guiding research on this topic which should be more critically examined, and he makes some judgments of the efforts of others—including my own[1]—which I must challenge.

Stephenson urges that in selecting the criteria for measuring modern attitudes in individuals (modernism) we should use dimensions which the community being studied defines for itself as establishing a continuum from modern to traditional. If he were content to advocate this as but one approach to measurement among others also acknowledged to be legitimate, there would be little to quarrel about. But he evidently feels the need to establish a monopoly for this particular approach. He says: "If no differentiation is made in the [local] culture between traditionalism and modernism, then movement along the dimension cannot be recognized by the participants, and the study of modernization in this cultural setting is meaningless" (Stephenson 1968, p. 268).

[1] Stephenson makes particular reference to only one of our project's publications (Smith and Inkeles 1966). He expresses himself as eager to know the logical connection between the themes we measured and our definition of modernity, but he evidently did not take the trouble to read the article we cited as presenting that connection (see Inkeles 1966).

Stephenson's statement itself is not meaningless, but it *is* scientific nonsense. It is tantamount to asserting that only the patient can decide on the proper criteria for the physician to use in deciding whether he does or does not have a particular disease. It is to say, in effect, that unless a culture accepts heightened temperature as an index of illness, and acknowledges the thermometer as an appropriate measure of temperature, it is "meaningless" to use that instrument to diagnose illness in the given culture. Impressed as I am by the wisdom of much folk medicine, I cannot see the necessity of substituting its criteria for those of medical science. Indeed, Stephenson is himself not ready to follow his own prescription. If it is really to be left to the culture to decide which are the relevant dimensions of modernism, why then did he bring in a panel of seven expert judges, five of them sociologists, to screen the statements of the local people? Such caution is probably wise. But should Stephenson not then bring his announced convictions into line with his practice?

Tests to ascertain what the people think, feel, or perceive to be the changes most relevant to judging individual modernization could certainly be a valuable component of a complete set of measures of this particular process of social change. But there will inevitably be other dimensions which the local citizens never thought of, or which are not salient to them, which a social scientist will, nevertheless, want to consider either on theoretical grounds or because he has empirical evidence from other studies to indicate they are important. Since the modernization of society is generally measured by a series of structural changes, one obvious theoretical interest is to ascertain how far attitudes and values are changing in response to the social structural transformations. An alternative sociological model would emphasize certain individual orientations as necessary elements for the functioning of a modern industrial system and would seek to establish how far a particular population was able to provide sufficient numbers of individuals with the requisite personal attributes. In either case, the attitude changes important to the sociologist might be taking place along dimensions which the local population did not conceive of as relevant to an assessment of individual modernization; which they might acknowledge to be important if questioned about them, but which are not ordinarily salient to them; or which might be salient, but could not be accurately assessed by the local citizens.

To make the point concrete, let us consider joining voluntary organizations or taking an interest in world affairs. No questions touching on these themes were included in Stephenson's set of scale items, presumably because his interviewees did not identify them as salient to the local community. To include such items would, if I read Stephenson correctly, be defined by him as "meaningless." How can we know they would be "meaningless"?

I think we can easily see how they might be quite meaningful. For one thing, Stephenson is probably confusing what is *salient* to the local population with what is *relevant* to them. The people in Shiloh did not seem spontaneously to use joining trade unions or following world news closely as

ways of judging an individual's modernity. But we do not know what they would have said if Stephenson had asked them directly: "Would such attitudes and behaviors be useful in efforts to distinguish a man with 'new ways' from those who follow the 'old ways'?" In many other researches on modernization, including our own, those judged modern on other attitudinal and behavioral criteria did more often join organizations and take a strong interest in foreign as against local news. I strongly suspect that if Stephenson had put the question he would have discovered that the people in Shiloh also consider such behavior relevant in judging whether or not a man is modern.

Whatever the local people *thought* about it, the true correlation between interest in foreign news and other components of modernism can actually be known only by including such questions in the initial set tested. Since Stephenson did not include them in his questionnaire, he cannot make his assertion on the basis of fact. We did include such items in our scales of individual modernization (OM) in six developing countries, and they are in fact strongly associated with items of the type which found their way into Stephenson's own scale of modernism in Shiloh.[2] There is every reason to assume that these questions would play the same role as good indicators of individual modernity if they had been included in the test in his community.[3]

We are clearly moving over from the question of how legitimate it is to use the social scientist's criteria of modernism to the question of what difference it makes in empirical relationships. In other words, we are moving from an evaluation of validity based on theoretical grounds to a judgment of it on empirical grounds. It follows from Stephenson's position that, if we used a scale founded *not* on the criteria of the local community, but rather based on the allegedly "meaningless" criteria of an outside social scientist, then the indigenous scale would "work" and the scale of the social science outsider would not. That is, only the indigenous scale scores would vary significantly in relation to relevant social indicators.

[2] Stephenson's scale includes items such as "The old ways are mostly best for me," rather like our question (CH-3) concerning the adoption of "new ways of doing things" in agriculture. In other respects as well, his questions parallel those used in our scales to measure themes in value areas, such as sex roles, religion, etc. It is of particular interest to note, therefore, that the type of item Stephenson used correlates with our summary scale of modernization no more strongly than the type he did *not* use. For example, the Stephenson-type item on "new ways of doing things" produced an item-to-(modernization) scale correlation averaging .273 for the six countries, while that on interest in world news yielded an average item-to-scale correlation of .294. These correlation coefficients apply to the Long Form of OM reported in table 1 in Smith and Inkeles (1966).

[3] Indeed, we have used the questions in Hazard, Kentucky, an Appalachian community I suspect is very similar to Shiloh. Furthermore, in our footnote 5 on page 357 of Smith and Inkeles we report that our student, William Lawrence, found in his sample of that community that the *structure* of attitudes in Kentucky was basically similar to that in the six developing countries. In other words, in Kentucky too, individuals who thought the "old ways" best were also less likely to join voluntary organizations or to take an interest in world over local news. Why Stephenson chose to ignore this information is not clear.

What should these social indicators be? Stephenson says "one would logically expect respondents of the more traditional scale type to be older, less educated, living farther from main roads, and in more traditional occupations" (p. 273, n. 29). These are precisely the sorts of determinants of modernism which other studies have cited, both on theoretical grounds and on the basis of empirical evidence, to validate their scales of modernity. While recognizing the high reliability of our scales, Stephenson goes on to report "the question of validity 'gnaws' at me throughout." But relief for his distress was in his very hands. The same *Sociometry* article which he quotes presents one form of our modernity scale (Short Form 3) derived by the criterion method, a method which is basically a test of validity.[4] The criteria we used—education, occupation, and residence—are much the same as those used by Stephenson (p. 273, n. 29) to validate his own scale. Furthermore, we quite explicitly describe (Smith and Inkeles 1966, p. 360) as a "test of adequacy," that is, of validity, the relation of our scales "to social indices which are generally acknowledged to be associated with modernity," and report (in n. 12) five-country average correlations of .434 with education, .179 with factory experience, and .142 with rural/urban origin. It is puzzling that Stephenson's use of such criteria of validity should be sauce for his goose which apparently will be denied to our gander.

If Stephenson really meant to show that measurement based on criteria external to the community is "meaningless," he should have constructed, or borrowed from elsewhere, a scale of the type he believes to be meaningless and then tested its relation to the same structural variables—such as age, education, residence, and occupation—used to validate his scale. Since he did not do so, he has no basis of fact for making his assertions. We do have the facts, and the evidence shows Stephenson to have produced a scientific red herring.

In the Indian phase of the Harvard Project on Social and Cultural Aspects of Economic Development we explicitly addressed ourselves to the theoretical and empirical issue which Stephenson raised and then promptly settled without reference to any evidence.[5] The following quotation from our report should make it immediately obvious that we were concerned with precisely the issue raised by Stephenson: "Can there be," we asked, "an entirely local, native, culture-based measure of modernity," and if it exists, what relation does it have to the transcultural measure of modernity which the project applied indiscriminately in six developing countries? To see if there was a distinctive local concept of modernity, Singh, my Indian collaborator, constituted a group of students as a local informant

[4] The scale we derived by the criterion method correlates around .80 with the scales derived with theoretical constraints playing the decisive role. This is highly relevant to the issues discussed above, since it indicates that sociological theory can identify dimensions of individual modernity which are validated by measures derived from empirical association with objective indicators.

[5] This phase of the work was under the supervision of Dr. Amar K. Singh, chairman of the Department of Psychology, Ranchi University, Bihar, India. A preliminary report is given in Singh and Inkeles (1968).

panel in Ranchi, much as Stephenson conducted his interviews in Shiloh. The students did indeed suggest a set of special qualities they felt distinguished between the modern and traditional man in Bihar. The traditional man, according to these local informants, would, for example, prefer well water to tap water, a twig (*datwan*) to a toothbrush for cleaning his teeth, and a wife who automatically gave the best portions of food to her husband. Translating these ideas into questions yielded a strictly local Indian set of ten items to measure modernity, none of which did we include in our transcultural measure.[6] These special questions were then combined in a distinctive Indian, or indigenous, scale of modernity.

The correlation of this indigenous scale and the transnational scale applied to the same population was .560.[7] This result is significant far beyond the .01 level. Indeed, it compares very favorably with the best results obtained when we related the summary modernity scale (OM) to other subscales of the transnational variety.[8] Thus, while the indigenous scale is far from being identical to the transnational, the two are clearly tapping the same underlying psycho-social attributes of the individual. If the indigenous Indian scale is taken as the criterion, therefore, we can firmly assert that the scale produced by the social science outsiders, who had not consulted the local population, is nevertheless decidedly "meaningful."

An alternative to assessing the meaningfulness of the social science outsiders' scale in competition with the indigenous version is to test the relation of both to some third, preferably objective, criterion of modernization. The most appropriate test is the association between the scales and social structure variables. When we submitted the two scales to such a parallel test with our Indian sample, the outcome was relatively unambiguous. The transnational scale was at least equally strongly related to independent variables of the sort Stephenson identified as logical tests of the relevance of a scale of modern attitudes. For example, the correlations with education are .658 for the transcultural and .451 for the indigenous scale; in the case of residence, the Pearsonian r is, respectively, .189 and .277; and for ethnic membership, that is, for tribal versus nontribal, the coefficients are, respectively, .369 and .129. On balance, the transcultural

[6] This was because our rule in constructing the transnational scale provided that we would use only questions asked in all countries. The transcultural measure did, of course, contain reasonable analogues of these distinctively Indian questions. This should enable us to recognize, again, that a sensitive theoretical orientation, however transcultural in conception, may be much less divorced from the concrete reality of diverse local cultures than, at first glance, it seems to be.

[7] This correlation applies to the Indian sample of cultivators, industrial workers, and urban nonindustrial workers, totaling 1,300 cases. The transcultural measure used for this correlation and those given below was the OM Long Form described in Smith and Inkeles (1966).

[8] Our scale of "political information," for example, was one with the highest reliabilities and the strongest relations to the independent variables. It correlated .604 with that form of the summary modernization measure (OM-2) which did not itself include any information questions.

measure derived from sociological theory predicts "modern" social characteristics more accurately than does the indigenous measure constructed on the basis of advice from local informants!

Clearly the transnational scale is not a "meaningless" measure, unless the indigenous scale, constructed by exactly the same procedure as was Stephenson's, is also "meaningless." In other words, to measure individual modernity, it is not necessary to restrict oneself to themes designated by community members as relevant dimensions. Relevant dimensions can also be derived, as ours were, from sociological theory.

In affirming the meaningfulness of scales derived from theory, however, we must be careful not to commit the very error into which Stephenson fell. The theoretically derived measure of modernity is not, in any *absolute* sense, better than one based on the views of local informants. It is meant to serve a different purpose. If your purpose is to identify the way in which local people see that process of change so often called modernization, then Stephenson's method of scale construction is clearly the one you should use, although you should stick more consistently to principle than he did. If, on the other hand, your purpose is to measure attitude change on dimensions which sociological theory identifies as important because of their relation to social structure, the method we used is probably more relevant. And if your purpose is merely to discriminate most accurately attitudinal differences among a set of men, still a third method might be, by that standard, the best. However, all three approaches would, within the terms of reference stated, be quite decidedly meaningful.

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THE AUTHOR REPLIES

I find Professor Inkeles's comments helpful in several respects. First, his remarks very effectively make the point that there is room in the world for more than one procedure for scaling the same attribute, a point which I seem to have obscured in trying to make. A valid and reliable transcultural measure of individual modernism certainly has its uses, as does a scale of modernism derived from a specific culture, and I would agree that the type of scale one chooses depends on the purposes one has in mind.

Second, a major source of misunderstanding about my critique lies in the interpretation of the term "meaningless," and Inkeles's commentary offers an opportunity to clarify the intent of that term. The sentence in which that term was used most strongly was the one that Inkeles quotes in his "Comments": "If no differentiation is made in the [local] culture between traditionalism and modernism, then movement along the dimension cannot be recognized by the participants, and the study of modernization in this cultural setting is meaningless." I should have added, "to those participants," but I felt that this redundancy was unnecessary since it was implied by the context. In short, I would agree that it may be possible to derive measures of modernism and modernization which are meaningless and unrecognized by a local populace but meaningful to someone outside the culture. Of course, there are dangers inherent in devising such measures, and I hope Inkeles would agree that among them are the possibilities of ethnocentric and even professional biases.

The likelihood of introducing this kind of influence is enhanced, it seems to me, when one takes too seriously the analogy drawn between the measurement of personal and cultural traits and the diagnosis of organic disease. The more proper analogy may be between modernism and mental health. Pneumonia, I expect, is pretty much the same wherever one finds it, and cases of equal severity probably incapacitate the afflicted individuals physically to about the same extent, no matter where they are located. Diagnosis by the physician is at least equally useful and probably superior to "folk medical" diagnosis in determining extent of impairment. Indeed, it would matter little (though it might matter some) whether the doctor and patient were from the same culture or whether one of them was from Park Avenue and the other from the Peruvian highlands.

The case is different with mental health and illness. Assuming that a transcultural nosology were available (and there may be some significance in the fact that there is not), would it not be true that the same professionally diagnosed illness may take somewhat different forms in different localities, and, furthermore, that the same professionally diagnosed illness may be incapacitating to different degrees in different localities? How "maladjusted" a given mental illness renders a person—and therefore how "healthy"—depends on the requirements of the system in which he is stationed and on the perceptions of the "illness" by other members of that system. Judgments of the extent of impairment might vary greatly depending on the social system and culture of the "patient" and the doctor, respectively.

Still, I will grant that it may be possible to devise a universally applicable scale of mental health. I would only suggest that such a scale runs the danger of taking on the properties of the persons who make it up. If it does, and if it is useful to know how much like oneself other people are, then it is a useful scale. It may not tell how "healthy" those people are, except to an egotistical operationist. To the extent that the scale is grounded in something besides personal conjecture, it takes on meaning in terms of these other grounds, and these grounds, be they theoretical, empirical, or

whatever, must be known before one can know the meaning of the measure.

To return to the subject of modernism, when I wrote the original article, I was precisely at this point. For, granting that meaningful measures of modernism can be constructed which do not take into account criteria of modernism recognized by local participants—measures which measure the same thing universally—there is still the question whether the OM scale is such a measure. I never meant to say it was meaningless, but I did mean to raise the question of what it meant. Is everyone going modern? I was simply uncertain from the information presented in the article by Smith and Inkeles[1] whether we could answer that question. It is one thing to find a sorting device which separates populations into different piles; it is another to determine the basis on which the device does the sorting.[2]

A third contribution made by Inkeles's comments is his useful distinction between "salience" and "relevance." As I interpret it, this distinction implies that a given criterion of modernity may be meaningful to a group without being recognized by that group. Using that distinction, the criteria in the Shiloh scale are salient, but they do not represent all possible criteria which are relevant. (Does any scale?) Inkeles speculates that there are a number of (at least two) other criteria which would have been relevant in Shiloh (the test for relevance apparently being item-to-scale correlation coefficients). His reasons for this speculation are (1) the finding that "they are in fact strongly associated with items of the type which found their way into Stephenson's own scale of modernism in Shiloh," and (2) the fact that the same kinds of correlations were found in Hazard, Kentucky.

I am not prepared to make this leap of faith with Inkeles. First, we do not know the extent to which particular items in the Shiloh scale operate like their supposed counterparts in the OM scale. (For example, the OM item on "old ways" is set in the context of an intergenerational discussion of corn raising, whereas the Shiloh item on "old ways" simply says, "I think the old ways are mostly best for me.") Second, even assuming the

[1] And from that offered in the Inkeles chapter in Weiner, which I have reread carefully since receiving Inkeles's comments. "The Modernization of Man" is, the way I read it, basically a proposed definition of individual modernity. It is more elaborate than the definition presented in the Smith and Inkeles article but essentially no different from it. The elements of this definition are based on what the author feels are requirements for successful functioning of an individual in "modern" social structures. My personal feeling is still that the linkage between *theory* and scale dimensions is weak and not explicitly stated, but perhaps I am being unduly harsh. The linkages between *empirical findings* and scale dimensions I also feel are weak. Although Inkeles claims that he has established the elements of modernity on the basis of the findings of others, on only a few instances does he tell who found what, let alone how. Despite such generalizations as "Many analysts of the problem propose . . ." and "Almost all serious scientific investigations of the question have shown . . . ," only one reference is offered in the entire essay. Although I respect Inkeles's opinion about what constitutes modern man, it still remains just that—an opinion.

[2] In this connection, Inkeles is incorrect when he says I would claim that indigenous scales would "work" where the scale of the social science outsider would not. The "nonsalient" scale may well show variations on a number of social indicators, but the scientist may still not know what the scale means to the people.

items are identical, one would like to know exactly what the "strong associations" were, especially in view of some of the relatively low item-to-scale correlation coefficients found in table 1 of the Smith and Inkeles article. An item-to-scale correlation of .294 means that one of these variables explains only 8.6 percent of the variance in the other. Some of the correlations in table 1 are lower than .10, meaning that less than 1 percent of the variance is explained by those items. If these low correlations are acceptable,[3] then one wonders what constitutes a strong association.

Third, there is the matter of the findings for Hazard, Kentucky. I hesitated and am still reluctant to comment on the Hazard footnote to which Inkeles pointedly calls my attention because, again I would like to have more information than that brief reference makes available. (I have, incidentally, attempted without success to pry a copy of this paper loose from the undergraduate librarian at Harvard.) The case for the universality of the OM scale would certainly be strengthened if it were found that the same set of items yielded the same results in Hazard as in six other societies (i.e., the same item-to-scale correlations, the same relationships between scale scores and external criteria, and the same relationships to local expressions of modernity and traditionism insofar as they differ from the OM dimensions). Whether the OM scale would yield the same results in Shiloh as in Hazard is an open question—one which I would be interested in having answered—since there are considerable differences between the two communities in population size, economic history and present economic structure, centrality of location, and political dominance (Hazard, unlike Shiloh, is a county-seat town). Whether such differences would affect the operation of the scale is unknown. With regard to the two specific criteria of "interest in foreign news" and "joining organizations," my guess is that Hazard and Shiloh might show internal differentiation on the former, but only Hazard on the latter.

In short, I do not believe we have quite "every" reason to assume that the OM scale items would be good (relevant) indicators of modernity in Shiloh, even using Inkeles's methods of determining relevance.

Inkeles's comments are helpful in a fourth way because they bring up the question of the relationship between modernism scales and external indicators. Certainly I would permit the makers of the OM scale to sauce their gander. I confess to being very much impressed by Short Form 3, derived by the criterion group method, which correlates highly (around .80) with other "theoretically derived" forms, although I wonder if one should not expect fairly high correlations among scales which contain many of the same items.[4] But my distress is not greatly relieved by the "test of

[3] Also note the relatively low coefficients between scale scores and external criteria, reported in Inkeles's comments and in the original article on page 360, referred to again below.

[4] A quick check reveals that the thirty-four items in Short Form 3 constitute approximately 29 percent of the items contained in the Long Form. Items contained in Short Form 3 which are also found in Short Form 1 comprise about 58 percent of the latter. Comparable figures for Short Form 2, Short Form 5, and Short Form 6 are 52 percent, 100 percent, and 71 percent, respectively.

adequacy" referred to by Inkeles (p. 360 of the Smith and Inkeles article), which yields correlations of .434 with education, .179 with factory experience, and .142 with rural/urban origin. Tests of significance may have shown that the odds against such correlations occurring by chance are great, as one would expect with a sample of about 4,770, but the sizes of the coefficients themselves indicate that the strength of the relationships between the social indices and the OM scale leaves something to be desired (and explained). The coefficient of .434, for example, means that education accounts for about 19 percent of the variance in scale scores. Factory experience accounts for a little over 3 percent, and rural/urban origin about 2 percent, according to my slide rule. Thus, knowledge of a person's education, factory experience, or origin would not permit accurate prediction of OM scale scores in a very large number of cases.

Incidentally, I would not like to think that the validity of the Shiloh scale stands or falls on the evidence presented in footnote 29 of my article. Indeed, the fact that this sparse information on relationships of the scale to external factors was not granted the dignity of space in the main text may show that I did not wish to use much of this sauce on my goose!

The fifth and most useful contribution made by Inkeles's comments is his presentation of information on relationships between an indigenously derived scale and the social scientist-derived OM scale. It seems to me that the case for the validity of the OM scale is strengthened enormously if it is shown to be highly correlated with indigenous scales such as that constructed for India. Indeed, if we were to view the external criterion method and the "indigenous scale" method as two independent ways of assessing scale validity, and if a scale passed muster on both counts, then the greatest skeptic should be silenced. I have pointed out my reasons for hesitation in claiming complete validity for the OM scale on the basis of external criteria. The moderately high correlations between the Indian "toothbrush" scale and the OM Long Form is more impressive. Of course, two things remain to be shown. How well does the OM scale correlate with indigenous scales derived in other cultures than India? (I would be interested in knowing how well it correlates with the Shiloh scale as well.) Second, if such correlations are high, it would still have to be shown that the universes of content being measured were the same. It is not immediately apparent how preferring tap water and toothbrushes is related to, say, feelings about whether a man can be good without religion. These are questions which can be answered with more research and better theory construction.

To summarize, Inkeles's comments require me to acknowledge that the case for the indigenous scale of modernism, such as that derived in Shiloh, may have been overstated. I can see that it is ambiguous and subject to misinterpretation. But Inkeles's response also provides an opportunity to point out that the case for the transcultural social scientist-derived scale, such as the OM scale, is not completely airtight either. Both of us have some homework to do. I would agree with Inkeles's concluding senti-

ment that one's purpose should dictate the type of measurement used.[5] To understand how these various measures are related to each other, both empirically and in theory, is also important. Finally, I fear that the set of attributes to which we refer as modernism or modernity are not related to each other or to "structural" variables in nearly so simple a fashion as either Inkeles or I imagine and that we would both do well to reread Gusfield's (1967) essay on "misplaced polarities in the study of social change"[6] before returning either to the sociometric laboratory or to the field.

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[5] I would not agree with his statement that my use of judges is inconsistent with my principle of using indigenous criteria of modernism. The judges were chosen not only because they were social scientists (not all of them were, anyway), or only because they were familiar with any abstract theory or definition of modernism, but because they were considered "experts" on the culture of the southern Appalachian region. Therefore the scale items were not exactly screened by "outsiders."

[6] One of the few studies attempting to relate attitudinal to "structural" variables of modernization is Arnold Feldman and Christopher Hurn (1966).

In Memoriam

Leopold von Weise und Kaiserswaldau

1876–1969

Since 1955 Professor von Weise was an advisory editor for the *Journal.* Although the *Journal* does not normally publish obituaries, in view of our long association with Leopold von Weise, who died early this year at the age of ninety-three, we want to add our personal sentiment of professional loss to the felicitous obituary written by Everett C. Hughes in the *American Sociologist* (May 1969). Probably it is those of us in Professor Hughes's generation who most appreciate his perceptive and sympathetic comments. We are grateful for Professor von Weise's helpful responses to the requests by the editors. But his contributions were by no means limited to his assistance to the *Journal* editors. Many of us learned whole realms of sociological lore and scholarship from von Weise's work, especially with the help of the late Howard Becker of the University of Wisconsin.

Book Reviews

Children of the Dream. By Bruno Bettelheim. New York: Macmillan Co., 1968. Pp. xiii+363. $6.95.

Robert Coles

Throughout his career as a psychoanalyst Bruno Bettelheim has been interested in man's adaptive (and not-so-adaptive) responses to severe social stress, the kind of stress that survivors of concentration camps faced, the kind that autistic children go through, and most recently the kind that many Israelis must face—as both political and psychological pioneers who are up against sworn enemies on all sides. Bettelheim's latest book, *The Children of the Dream*, like *The Empty Fortress* and *Love Is Not Enough*, demonstrates how successfully he has managed to record hundreds of observations and, at the same time, make psychoanalytic inquiry a living, flexible, imaginative, and sensitive exercise.

This book suffers in a brief summary because, as always, Bettelheim is a shrewd social and psychological observer. It is such a pleasure to meet an analyst who knows what takes place in the unconscious but at the same time has a real sense of how societies affect individuals—yes, "deep down," profoundly and without their awareness. The thrust of Bettelheim's argument is that the traditional psychoanalytic view of childhood—alas, the traditional psychoanalytic view of childhood is all too often the entire psychoanalytic view of man—applies very well to certain kinds of Western, white, middle-class people but has to be thoroughly revised, modified, and qualified if, say, psychoanalytic justice is to be done to the people of Israel's kibbutzim. There, children very quickly (in a matter of weeks) become members of a community, not a small, tightly knit family. There, a boy or girl does not have *a* mother, *a* father, one or two brothers or sisters. There, children learn laws and rules from all sorts of people, learn most of all what sharing *really* means, learn, it can be said, that sharing can be a way of life, begun right at the start and kept up throughout life.

We liberal, psychoanalyzed parents tell our children to give, to share, to be generous; and these days those children are telling us that they want to do more than apportion their largesse, financial and emotional, to worthy causes and people. They want a community, a community of the committed, a community that, while surrounded by America's materialism and industrialism and imperialism (as they see it), can yet survive and grow. I wonder how many of those youth realize what Israel's kibbutzim have done—to bring an idea or an ideal like "communal living" to life, to the life that a child, indeed an infant, knows and never quite forgets. I wonder, too, whether many of us, citizens of America in the twentieth century, could quite do it, do what those Israeli parents do: in many senses, from our viewpoint, surrender the child to his or her society.

Bettelheim analyzes what the surrender means, its advantages and its disadvantages, its value and its dangers, its gains and its losses. There is no utopia on this planet, not a political one or a psychoanalytic one or one that comes about through this or that manner of child rearing. The "children of the dream" do not know "our" fierce loyalties, our possessiveness, our intense rivalries and jealousies, or even our oedipal complex, as a result of which, no doubt, some psychoanalysts will find them "psychologically deprived" and "psychologically disadvantaged" children. (*Everyone* has an

oedipal complex, I was told during my psychiatric training. The societies and cultures may change the complex's "forms," but its existence "cannot be questioned." I can still hear those last three words and see the face, grave and confident, sure that some truths are unassailable and that some students are lucky enough to have nothing to question or doubt.)

In any event, the Oedipus complex and all that is implied in its development and resolution have a lot to do with the way we are. We live with our parents; they are in our minds. In fact, the particular intimacy that develops between a mother and a child sets the stage for the very way we think, for the voices we always hear, with all the tenderness and disapproval (it is always both) those voices convey. Bettelheim, in a way, gives us yet additional information about the *limits* of personality development. Not only individual fathers and mothers determine who we become, how we think and feel and get along with one another. There is just so much a given society or culture allows. The child of our middle-class suburban society is very distinctly different, at one or two, from the child of an Israeli kibbutzim. The two children have begun to learn different psychological maneuvers—in keeping, of course, with the different ways they are treated, all sanctioned and encouraged, naturally, by particular social systems. While all of that may sound rather obvious and is certainly well known, it is rather a relief to find such knowledge *assumed* by a psychoanalyst and even systematically used in a conceptual way.

What is more, we realize how much we have lost in these years: a generation of analysts have *not* made the kind of social *and* psychoanalytic observations, out "there" in the world, that urgently need to be made—for the sake of psychoanalysis as much as for fields like social anthropology.

Defining the Situation: The Organization of Meaning in Social Interaction. By Peter McHugh. Indianapolis: Bobbs-Merrill Co., 1968. Pp. 143. $2.95.

Gerald Platt

Harvard University

McHugh has written a beguilingly simple and exceedingly important book. Because of its simple and intelligible language, many may underrate the importance of its contribution. Perhaps the most frequent and mistaken criticism will take the form, "That's all commonsensical," or "What's so new about that?" However, neither of these comments is close to an appropriate reading of the work.

Working out a theoretical orientation that is between phenomenology and symbolic interaction but much closer to the former, McHugh asks what formal features or rules actors (aware or unaware) employ in order to come to definitions of their social surroundings. The author is not engaged in discovering the content of that definition because the content can vary, but rather he is involved in discovering how definitions of any kind are achieved and what rules are employed in achieving definition. Indeed, McHugh makes a rather significant epistemological point when he claims that social order and definition of the situation are equal.

McHugh emphasizes two dimensions of the social milieu which actors

rely on to achieve a definition of the situation—a temporal component (emergence) and a social spatial component (relativity). The former relies heavily upon the actors' treatment of past and future expectations to organize the present situation. The latter, relativity, relies upon the actors' treatment of social interpretation of physical, social, and structural features of the contemporary scene.

The beguiling character of the book lies first in the cogent way in which McHugh abstracts two general features of social environments and courses of action—time and space—and then develops a simple set of categorical rules which make up the *detailed* features of each of these dimensions. The author claims that emergence may be cataloged by, for example, the rule of imputing a *theme* to any symbolic communication, that the theme is *elaborated* over the discourse, that new and even contradictory, divergent, etc., elements in the discourse are made to *fit* the theme. In all, emergence is characterized by five subrules of treating discourses, courses of action, objects, etc., and relativity by six rules. The significance of this is that McHugh has developed a theoretical framework for describing the phenomenology of actors in their courses of action whereby actors succeed in defining their surroundings and, in turn, generate a sense of order concerning their varying, mutable, and multistimuli environments.

Treating an interaction so that one discovers or describes what rules actors use to define *their* situation is not commonsensical, nor have we known it before, because it was not in the literature. And McHugh is correct when he relates that, to date, the "definition of the situation" has been used only in the most varied and amorphous way. It is a concept too often taken for granted and not unlike certain inert gases, uninvestigated precisely because they were conceived as inert.

If McHugh has done nothing else, he has taken this old sociological saw and carried it much further and, indeed, in a more *detailed* theoretical fashion than has ever before been conceptualized. But McHugh has done more than this. He has, in addition, attempted to conceptualize time as a theoretical constituent feature of social courses of action. And while everybody in sociology talks about time and its significance, too few American sociologists have done much about it.

But McHugh's work is not without fault. Perhaps its weakest aspect is the lack of empirical substantiation of his theoretical discourse, and this is said not because the work tends toward "soft" sociology. For example, when McHugh explains why his data went awry under the conditions of anomie, one gets the distinct impression that he himself is engaged in "defining the situation." That is, he discovers a theme in his data, elaborates it, finds its fit, and so on.

There are other methodological-theoretical problems. For example, does the condition of anomie reside in the technical manipulation (the structure of the responses to subjects' questions) or in the actors' incapacity to define the situation (for whatever length of time)? McHugh suggests it is the latter, and naturally this is theoretically the more important. But methodologically the condition of anomie tends to be generated by relying heavily on the former. Further, given McHugh's theoretical orientation, I am sure that he is well aware that to manipulate any event at all, as he has done experimentally, is to alter it. Yet he makes no theoretical provision (except ad hoc references to the experiment) to account for the effects of the manipulation on defining the situation.

Finally, a general point of criticism relates to the theoretical framework from which McHugh derives his work. McHugh does not claim that the features he offers are an exhaustive set of rules for defining the situation, and yet he uses no others in analyzing the protocols of his respondents. Are we to assume a systematic analysis or a programmatic scheme by which to address the problem of how actors go about defining their situation? I think we must assume the latter. And if the latter is correct, how is compliance even to a limited set of rules achieved? That is, what are the features that stabilize *these* rules? Without attention to these points, I fear the whole endeavor must forever remain programmatic.

I have said that McHugh's work is not without fault—but this is equal to saying it is within the realm of social scientific contribution. The critical issues in evaluating a work in our field are its creativity, its originality, the degree to which it advances a body of knowledge, its cogency, its clarity. By all of these standards, McHugh, in this short work, has attempted and accomplished much more than most social scientists.

Varieties of Police Behavior: The Management of Law and Order in Eight American Communities. By JAMES Q. WILSON. Cambridge, Mass.: Harvard University Press, 1968. Pp. xiv+309. $6.50.

Thomas Smith

University of Michigan

Most everyone has the experience in traveling of passing through a variety of communities, being ticketed in one, warned in another, and given directions in a third. But few of us reflect enough upon such varieties of experience to suspect that, among the three, there may be the systematic differences of police culture or style that James Q. Wilson has isolated and analyzed. This brilliant book is a comparative study of law enforcement and order maintenance in eight such contrasting American communities—six in New York (Albany, Amsterdam, Brighton, Nassau, Newburgh, and Syracuse); Highland Park, Illinois; and Oakland, California. None of these is the "typical" American community; if it were, the exploratory purposes of Wilson's research—differentiating varieties of police behavior and their correlates—would hardly have been served. Grounding this comparative focus, ordering the differences into a coherent rhetoric, is one of the richest appreciations of the generic aspects of the roles of patrolmen and police administrators to have appeared in the literature. The book is a blend of the particular and the general, of practical and theoretical wisdom, adding significantly to the important contributions of Wesley, Banton, Skolnick, and others by its systematic concern with placing the understanding of police systems into a fuller comparative perspective.

In 300 pages Wilson carries us from an analysis of the roles of administrators and patrolmen—in which he isolates the critical issue of police discretion, its use and management—to a fourfold typology of discretionary situations built out of two distinctions, order maintenance versus law enforcement and police-invoked versus citizen-invoked action. The author then moves to a highly suggestive differentiation of three typical police "styles"—watchman, legalistic, and service—to an accounting of these

styles in terms of surrounding political cultures, and, finally, to a set of concluding policy implications.

The inherent difficulties of patrol work are analyzed in relation to the function of maintaining order, with the law serving as one of several resources in a context constrained by competing standards of justice and cultural differences among population groups. The contrary emphasis on law enforcement among police administrators and their indifference to "planning" is traced to the paucity of reliable means of evaluating the effectiveness of police work and to the inability to rationalize police discretion in most order-maintenance situations through clear-cut rules. Focusing then on the "determinants of discretion," Wilson introduces the typology of discretionary situations, discussing each of the constructed types by reference to the forms of crime or disorder it denotes, the associated police actions, and the extent to which each type is subject to administrative control and is influenced by variations in the characteristics of the eight communities. Detailed attention to differences among police activities in these communities then leads him to the second, related typological endeavor in the book, identifying varieties of police style. The "watchman" style differs from the "legalistic" style in that the former emphasizes maintaining order and the latter enforcing the law. The third pattern, the "service" style, is a hybrid enabling police to balance both of these functions and is found mainly in culturally homogeneous suburban communities where police action is directed to maintaining a concept of public order shared with the community. The typology is useful both for differentiating departments in terms of outlook, strategy, organization, and other matters, and for suggesting the connection between police action and varieties of political culture. The watchman style is found primarily in cities with "caretaker" governments, in which politicians appeal mainly to working-class constituencies on the basis of personal ties and party loyalty and maintain a low level of public services. Legalistic departments are found in cities with strong, professional city managers. And service departments are found where politics are oriented to the provision of amenities to communities which expect them, where government is itself service oriented.

Despite the overall value of these contributions, the book has its faults. The major one is Wilson's avoidance of any sustained concern with what is obviously one of the central variables explaining differences in police behavior, namely, *legitimacy*. That he has managed to get as far as he has without reporting a connection between phenomena like police defensiveness, bureaucratic alienation, even the types of styles as he has formulated them, and variations in police legitimacy is only a testament to the sustained power of his other concepts. This avoidance of treating police action in the tradition of analyzing authority and its legitimation, an avoidance not confined to Wilson's book, closes off a realm of powerful tools of sociological analysis. Arguing from experience that police work is inherently subprofessional or craftlike is a ramification of this conceptual curtailment. It fails to appreciate the extent to which a supportive, mandating environment, one not so extremely hostile or apprehensive as Wilson speaks of in discussing subprofessional police work, is a condition of the nourishment of professional norms. That there are varieties of police behavior and style bespeaks, in part, the variance within and among these normative environments.

Nevertheless, Wilson's monograph is the best treatment of these varieties yet to appear. The overall value of his contributions, the clarity of their development, the experiential reportage illuminating the variety of paradigms animating police activity, are enough to recommend this book for the serious study of all sociologists interested in occupations, government, and authority systems.

Sociology and Everyday Life. Edited by MARCELLO TRUZZI. Englewood Cliffs: Prentice-Hall, Inc., 1968. Pp. 371. $3.95. Paper.

Carol Brown

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One of the petty annoyances I find in my reading concerns the naming of books. A title claiming more for the book than it can deliver strikes me as intellectually dishonest; a title that is too honest is usually a bore. A good title should both describe the contents and appeal to the imagination without exaggerating the reader's expectations. One of my favorites for these reasons is W. J. Goode's essay on "The Theoretical Importance of Love" (*American Sociological Rewiew*, vol. 59); one of the worst I have ever seen is *Sociology and Everyday Life*.

I would not harp on the matter if this enjoyable book did not deserve to be better named. It is actually a collection of essays about everything *but* everyday life, from *Mad* magazine, Beatlemania, flying saucers, and circuses to more common matters like the Mafia and sex. But unless the publishers really believe that the "everyday" minority groups in this country are dwarfs and nudists, I would suggest they return to their alternative title, *The Hip Reader in Sociology*.

The twenty-nine essays on twenty-nine subjects range from excellent to lousy. Although the treatment is sometimes more trivial than the subject, quite a few of the topics are significant enough to deserve more attention, and some of the more obscure topics are quite well treated. I hestitate to pick the ones I liked best; "each to his own taste" in a zany collection like this. But here goes.

I read Dean Ellis's excellent article on the identification of a speaker's social class by his speech patterns when it was first published, and I remain impressed. Anyone who thinks Henry Higgins belongs in England is advised to study these findings and keep his mouth shut. Two more theoretical articles are Vilhelm Aubert and Harrison White's chapter on sleep—have you considered the social implications of being unconscious eight hours a day?—and Robert Blauner's article on death, which speculates that the importance of death in religion and ritual depends on the characteristic age and social situation of those dying in a given society. The only article that was intended to be laughed at (there are a few that unfortunately ended up that way) is Warren Hagstrom's tongue-in-cheek analysis of Santa Claus, which is worth the price of the book.

Three others I liked for a variety of reasons were James Henlin's examination of why taxi drivers trust their passengers, Sidney Aronson's discussion of the overlooked historical importance of bicycles, and Donald Ball's analysis of telephones and telephoners. Other readers are invited to make their own choices as it suits their fancies.

On the whole, the essays are enjoyable and worth reading. The book is a must for everyone who is tired of serious sociology, and I would recommend samplings of it for lightening up undergraduate courses. Just steer students away from the real clinkers, or they will be convinced we are all out of our minds. They may have good reason to believe that anyway; in fact, the more I think about some of the nonsense that passes for serious sociology, the better this book looks to me. At least these authors know when they are talking nonsense.

Interpersonal Styles and Group Development: An Analysis of the Member-Leader Relationship. By RICHARD D. MANN in collaboration with GRAHAM S. GIBBARD and JOHN J. HARTMAN. New York: John Wiley & Sons, 1967. Pp. vii+308. $8.25.

Philip Brickman

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What a person chooses to study of human interaction expresses a view of human nature. For Richard Mann, Graham Gibbard, and John Hartman, the emotions and fantasies aroused by other people are the important features of interaction. In this comparative analysis of four "sensitivity training" groups or "T-groups" (each meeting for thirty-two sessions as a course in Harvard Summer School), the authors interpret the direct and symbolic indications of group members' feelings—hostility and affection, anxiety and depression, guilt and identification, dependency and self-esteem—in their developing relationships with the leader.

Work, as defined by T-group leaders, is honest communication and sharing of feelings by autonomous members. The conditions under which a group can work is a major theme of this study. Before a major work phase occurs in any of the four groups, there occurs a period of dependent complaining, a period of abortive or "premature" work effort, and a phase of dramatic rebellion or confrontation. The authors suggest that the leader's ability to surmount the confrontation, and the fantasies attendant upon it, without either being destroyed or destroying group members provides the basis for members' identification with him and their subsequent work.

The work stage and other stages emerge in this book less as phases that all members pass through than as a process by which some members replace others as salient figures in the group. Each group, for instance, contains people who resist both the leader's influence and his values (in either a "paranoid" or a "moralistic" style); these people dominate the group's early efforts to reject the lack of structure.

If all groups pass through such stages, and if such stages are in general mediated by expressive roles, teachers and other practitioners might well want to modify their approaches. The extent to which groups do function in this fashion is an issue social psychologists might wish to pursue in their own fashion. One might look, for instance, at how such processes are affected by various dependent variables such as group cohesiveness or group productivity. Unfortunately, people working in the process-oriented, observational tradition of group dynamics have had little use for such variables, while people working in the experimental tradition of group dynamics have had little interest in the rich, confounded interaction process.

A major asset of this work is its sustained effort to convey the nature of T-group experience. The book begins with a transcript of a session and ends with a case history; in between, discussions of scoring categories, stages, and roles are always accompanied by excerpts from the transcripts. This makes the book accessible to the nontechnical reader and should enhance its value for the social psychologist unfamiliar with T-groups.

The overriding problem with this work is the extent to which findings are embedded in the coding scheme. This scheme makes "expressing depression" and "denying depression" major categories; not surprisingly, these events help define the group stages. If one begins (like Robert Bales), with "giving orientation" and "asking for orientation" as major categories, these will define group events. The problem of "multiple interpretations" is not a trivial one; one possible approach to it might be to compare the results of different coding schemes applied to the same interaction sequences.

None of this should detract from the merits of this book as the best available work on T-groups, both as a description of the experience and as a theoretical approach to the analysis of group-process data.

Angels in Marble: Working Class Conservatives in Urban England. By Robert McKenzie and Allan Silver. Chicago: University of Chicago Press; London: Heinemann Educational Books, 1968. Pp. 295. $11.00.

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"In the inarticulate mass of the English populace, Disraeli discerned the conservative working man as the sculptor perceives the angel prisoned in a block of marble." So wrote the *Times* in 1883. Disraeli's optimism was not shared by many of his fellow Tories. When Parliament granted the franchise to the majority of British working-class males in 1867, some were inclined to see revolutionary consequences. However, the fact that the Conservative party succeeded in maintaining itself in office for most of the century that followed suggests that Disraeli was right. The party did so by persuading a substantial proportion of working-class voters that it was in their own interests to support a party whose leadership was drawn almost exclusively from the upper and upper-middle classes. The authors explore the various ways in which the Conservatives made their pitch to the working class. The party in the nineteenth century was not above blatant appeals to imperialism and racism, which are curiously echoed in the anti-immigration sentiments of Mr. Enoch Powell today.

However, the central theme of the study is the role of deference in working-class political attitudes in Britain. The historical analysis is followed by an examination of opinion poll data collected between 1958 and 1963. The social and educational system in England encourages the preservation of an elite which, whether their status is ascribed by heredity or achieved through merit, commands the respect of a large proportion of working-class voters. It is notable that a deferential attitude is found among Labour party supporters as well, although not as frequently as among the Conservative voters who are manual workers.

There is another group of working-class voters who support the Conser-

vative party on more pragmatic grounds. McKenzie and Silver call the nondeferential working-class conservatives "seculars." This is not a particularly appropriate term for what, in practice, is a residual category.

This book invites direct comparison with E. A. Nordlinger's *The Working-Class Tories* (London: Macgibbon and Kee, 1967), and with W. G. Runciman's *Relative Deprivation and Social Justice* (London: Routledge & Kegan Paul, 1966). All three studies address themselves to the apparent contradiction between an interest theory of political behavior and the fact that the Conservative party in Britain obtains half its support from the manual working class, a third of whom habitually vote Tory. McKenzie and Silver's research actually predates the other two studies, although its publication came later. Taken together, the three studies go a long way toward explaining the paradox. Nordlinger uses an explicitly sociological frame of reference and puts forward a theory of stable democracy which suggests that a mixture of acquiescent and directive attitudes toward political authority, in individuals or in the major conflict groups within a society, is a condition for stable democracy. Runciman introduces a psychological dimension and bases his explanation on reference-group theory and feelings of relative deprivation.

In contrast, McKenzie and Silver lean more heavily upon historical interpretation. They argue that British political and social culture has acted directly upon both the conservative elite and large parts of the working class, disposing the former to propose and the latter to accept doctrines and policies which have continued to encourage working-class conservatism. McKenzie and Silver argue that English working-class conservatism is not inconsistent with an interest-group explanation of voting behavior, since those supporting the Tory party expect economic benefits to follow. The authors argue that English deferentials feel themselves morally equal to the elite because they accept the doctrine that those who fulfill "their stations in life" nevertheless contribute to the common good. They compare this view with ideologies of subordination which impose a sense of moral inferiority on those in lower social positions. They suggest that, in direct contrast with the experience of Negroes in America, working-class deferentials in England are provided with an adequate sense of self-esteem. In this connection the authors again quote Disraeli, who stated: "the people had got what they wanted, and they got more than they wanted. They were content, and were grateful" (p. 249).

It may be one of the peculiar qualities of political democracy in England that by not emphasizing equality or even equality of opportunity for everyone, it has not raised unrealistic expectations. In this way a system has been legitimated that preserves the power of a hereditary elite.

Winchester and the Public School Elite: A Statistical Analysis. By T. J. H. Bishop in collaboration with Rupert Wilkinson. London: Faber & Faber, Ltd., 1967. Pp. 263. 63s.

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It is, of course, remarkable how the English public schools have persisted in playing such an important and constant role in the confirmation and

generation of Britain's elites and upper classes despite the social changes and ferment in that nation generally and in its educational system in particular. *Winchester and the Public School Elite* documents some aspects of the nature and strength of this persistence, analyzing over time the social correlates of recruitment to and performance during and after matriculation at Winchester, one of the top group of elite public schools.

The authors describe some interesting sociological patterns. For example, they argue for the notion that the public schools' introduction of an officially open competition for admission actually increased the social exclusiveness of these institutions, for it led to a great growth in the numbers of expensive preparatory schools which could teach the necessary Latin for passing the open examinations. Largely, however, the authors present us with great amounts of relatively unanalyzed quantitative data. Although the work is seemingly addressed to present-day problems, directly or indirectly bemoaning the biases of the system throughout, it lacks contemporaneity. The authors say that their account "applies to Winchester until the 1950s. To what extent it applies to the Winchester of today is a matter of which we have no first-hand knowledge" (p. 18). The data largely consist of information on the social characteristics of students and their parents and the later occupational accomplishments of graduates attending Winchester into the 1930s.

This is not to condemn a work for being social history. Bishop and Wilkinson present us with more tables than history, however, and their analysis of the information is weak. First, most of the presentation consists of two-variable tables coupled with speculations in the text about what other factors might be at work—but without the effort taken to use the available data to find out whether indeed these interpretations are correct (and without the excuse that the numbers of cases were too small to do so). Second, the crucial analysis that concludes the book, looking at intergenerational changes in correlates of success in careers following graduation from Winchester, is severely flawed because the authors confuse strength of association with level of significance. And they do this even when the numbers of cases vary radically between generations. Thus, for example, the authors, making one of their major conclusions and a startling one if true, tell us (p. 202) that "over three generations there is an increased career significance of social origin." Yet this conclusion appears to be based only upon a difference in significance level between the first compared with the second and third generations, and the first generation seems to contain 982 cases, as against 2,232 and 2,055 in the second and third generations, respectively. Because Bishop and Wilkinson do not provide the actual data so that one could tell whether their statistics simply reflect the direct association which obtains between N and χ^2, we are left adrift.

In total, while the book makes interesting comments in passing on Winchester and on British education, its primary thrust is the presentation of detailed data on matters like the exact scholastic achievements of "Wykehamists" (a word deriving from the name of Winchester's founder) who went on to Oxford and Cambridge. The volume should appeal to those for whom the details of the competition among elite schools hold the same fascination as do past seasonal records for the truly devoted fans of baseball or soccer.

Ideological Change in Israel. By ALAN ARIAN. Cleveland: Press of Case-Western Reserve University, 1968. Pp. xii+220. $6.95.

Irving Zeitlin
Indiana University

As the author himself acknowledges at the outset and intermittently throughout the book, ideological change in Israel has been minimal and slow. Indeed, the reader learns very early that the central problem of the study is not the change of ideology but its relative nonchange. The author attributes this to the allegedly "conservative nature of the Israeli political system [which] guards against radical alteration, leaving the fundamentals of Israeli politics relatively unchanged." Moreover, the carriers of ideology in this study are not the Israelis in general but a number of elites: 100 members of the legislative and administrative elites and 133 university students, "members of a future elite." This study, then, could more accurately have been entitled: "The Relative Absence of Ideological Change among Certain Israeli Elites." Nowhere, however, does the author address himself systematically to this interesting phenomenon.

In the first chapter, on "Voting and Ideology," Alan Arian presents data showing that the parliamentary elite has remained traditional in its political-ideological outlook, while the electorate has presumably acquired a new ideology at once "less socialistic and more pragmatic." The members of the *Knesset* (parliament) appear to have lost touch with the masses; yet the masses continue to elect them. No explanation of this phenomenon is offered except to suggest impressionistically "that many Israeli voters tend to vote to the left of their ideological positions." In this contest much space is devoted to adaptations of the Guttman scale that add little or nothing to the reader's understanding.

Following this are two chapters on the *Kibbutz* movement and its ideology. There the author seeks to establish that the *Kibbutz* ideology may be regarded as the substance of the traditional value system of the Israeli society as a whole. Among the elite groups interviewed, the members of the *Knesset* adhere most closely to these values, the administrators less closely, and the students least.

In the next two chapters, on ideological change, we learn that the dominant ideology appears therefore to be declining. The author recognizes that the "notion of the 'decline of ideology,' while deceptively attractive, is exceedingly unclear." He therefore alerts us to the qualifications that must accompany the proposition: If the traditional ideology is declining, this is true not in the sense that its content is being repudiated but rather in the sense that its main elements are adhered to with less intensity.

Yet the younger generation, the future elite, seems indeed to reject the socialist dimension of the *Kibbutz* ideology. Unfortunately, however, we never learn what they are striving to replace that dimension with and why. For, as Arian acknowledges, "the very nature of the analysis does not provide us with answers about their positive ideological positions."

Generally, this study leaves one feeling somewhat disappointed. Arian recognizes that the main sources of social and ideological change, as well as resistance to these processes, are to be found not among elites but elsewhere. He writes: "Changes in a society and its ideology are likely to occur long before they are reflected by the official actors of the society." Yet, the

author decided for some reason to confine his attention to elites—thereby missing, in my opinion, an opportunity to study his problem at a more fundamental level.

Finally, one might quarrel with some of the author's bald assertions in his "Conclusion." For example, the Israeli political system is a "*de facto* one-party system." Or "National politics is party politics and party politics is elite politics." These statements are at best subject to crippling reservations and at worst simply false or misleading or both.

Man and Aggression. Edited by M. F. Ashley Montagu. New York: Oxford University Press, 1968. Pp. xiv+178. $1.95.

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Occasionally a writer exchanges the garb of a scholar for that of a master. He spurns the dictates of the scholarly role by flagrantly ignoring the scholarly method, so much so that some other members of the scholarly community may find it incumbent that the record be set straight. Ashley Montagu's *Man and Aggression*—a compilation of fifteen articles evaluating Konrad Lorenz's *On Aggression* and Robert Ardrey's *African Genesis* and *The Territorial Imperative*—is just such an attempt. Montagu initiated his task hoping "to correct what threatens to become an epidemic error concerning the causes of man's aggression, and to redirect attention to a consideration of the real causes of such behavior" (p. ix). His collaborators have more than vindicated him. They have centered their arguments around the following questions: (1) Does man—along with certain other animal species—have an innate instinct of aggression, or is aggression a learned trait? (2) Lorenz and Ardrey argue that we can learn about human behavior from evidence gathered by studying animals. Is this argument sound, and are their techniques of data collection both valid and reliable? (3) Are they qualified to make the assertions they are making, or are they quacks tracing the causes of malaise to a source that is false—thus leading to consequences that are dangerous?

Answering the first question, Barnett, Gorer, Scott, Schneirla, Boulding, Zuckerman, Stewart, Beatty, and Crook are in full agreement with Montagu that evidence does not support Ardrey and Lorenz's theory that man is instinctively belligerent and aggressive. These contributors, along with Ralph Holloway, also agree with the editor when he says that evidence rather shows that the role of learning and experience in influencing the development and expression of aggression is substantive (p. 14).

In reference to the second question, no one in this volume seems to have attacked the obvious reductionism on Lorenz and Ardrey's part more vigorously than Edmund Leach. "Can we take fish and birds as our models?" he asks, and then goes on to say: "to argue that the two behaviors are comparable in anything except a purely metaphorically sense is just nonsense" (p. 66). His premise is that animal behavior and human behavior are two different levels of reality and that it is the development of language and culture in human beings which makes them incomparable with other animals (p. 71). Evaluating the quality of data-gathering tech-

niques, Sally Carringhar, with her background as an ethologist, finc Lorenz's methods of data collection invalid and therefore unreliable. The are invalid because of the circumstances under which the latter studie animals: "with geese and fish, Lorenz is presenting evidence provided b captives, and captives held in conditions so unsatisfactory as to stimula fighting" (p. 47).

In regard to the third question, investigating the nature and cons quences of Ardrey and Lorenz's propositions, J. P. Scott points out that is an erroneous notion "that fighting over the possession of land is a powe ful, inevitable, and uncontrollable instinct." Moreover, it is a belief th may have dangerous consequences because "it might well lead to the co clusion that war is inevitable and therefore a nation must attack first an fight best in order to survive and prosper" (p. 57). Kenneth E. Bouldir provides further support on this point when he suggests that both Ardre and Lorenz have provided justification and legitimation to the Unite States war in Vietnam in the name of antiquity by reference to biologic ancestors (p. 89).

This book does not propound any original thesis of its own; neither w this its avowed intention. It is a critical evaluation of somebody else thesis and should be judged as such. Despite the negativistic slant of t arguments of the contributors, this anthology cannot be dismissed simp as an exercise in negativism. It is rather very positive in being negative, ar in such a way that the moral and scientific gains are anything but negativ In my opinion, this is a timely work, and for all times. Hence, it shou make appropriate reading for students of human behavior at any leve

Control in Organizations. By Arnold S. Tannenbaum et al. New Yorl McGraw-Hill Book Co., 1968. Pp. xii+325. $9.95.

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Recipe for an instant book: Take nineteen articles (sixteen of which ha previously been published); sandwich them between a brief introducti and summary (parts of which have also been published); add one of each the following: cover, title, dust jacket, and price. Presto: there you are wi an instant book to add to your growing bibliography.

The results of this technique are exemplified by this collection of articl on control in organizations, written (primarily but not exclusively) b Arnold Tannenbaum and his associates. However, the "instant" flavor the book should not be considered a reflection on the quality of the ingr dients. The articles themselves add a substantial increment to our empiric knowledge of organizational processes, and they should be read by everyo who undertakes empirical work in this subject area.

Tannenbaum defines the concept of control as "a cycle beginning wi an intent on the part of one person, followed by an influence attem addressed to another person, who then acts in some way that fulfills t intent of the first" (p. 5). He introduces the idea of a "control graph" which the vertical axis represents the amount of control exercised on a giv hierarchical level of an organization, and the horizontal axis represents t

various levels of the organization on which control can be exercised (for example, top management, second line supervisors, rank and file, etc.). To define this concept operationally, members of the organization (usually rank-and-file members) are asked to determine on a five-point scale how much the personnel on a specified level of the organization have to say about what goes on in the organization. An important property of control, as operationally defined in this manner, is that it becomes an expandable resource rather than a zero-sum commodity, since the amount of control exercised on one level of an organization is independent of that exercised on other levels. Organizations can and do vary in both total amount of control (as measured by the average height of the control curve, which equals the sum of the average amount of control on each level) and in the distribution of control (the shape or average slope of the curve). The more positive the slope, the greater the extent to which members at lower levels of the organization have some control or influence over organizational decisions. For example, in comparing the findings of several studies, including 112 local leagues of the League of Women Voters, 4 local unions, 32 stations of a delivery company, and 36 automobile dealerships, the authors find that in only 10 percent of the leagues is the ideal or desired slope negative, whereas the ideal slope is negative in 99 percent of the business-industrial organizations.

The book(?) is filled with far too many intriguing and suggestive findings to summarize them here (in fact, the author seems to have the same difficulty, for he fails to summarize them in any detail anywhere). Examples are: the recurrent finding across various types of organizations that total amount of control is positively related to effectiveness, and the finding that only in the leagues mentioned above is effectiveness related to degree of positive slope. This finding, combined with the differences in ideal slope mentioned above, suggests that democratic control is only a factor in effectiveness when its consistency with the values or expectations of organization members becomes problematic. For some reason the most tentative findings are also the most fascinating—for example, the finding that supervisory groups studied in Yugoslavia desire a more positive slope of control (that is, more control for workers) than that which they perceive to exist. The contrary is true of supervisors in the American organizations (although not true of workers in American organizations). Hopefully, more such cross-cultural comparisons will be made.

The fact that these measures are based on the aggregated perceptions of organization members is bound to bring up all of the problems inherent in purportedly objective measures based on perceptions. The authors are well aware of these and other potential limitations on the instrument they have developed; and their frank acknowledgment and analysis of problems of reliability, validity, and causation set an example which all researchers in this area could commendably follow. The fact that the instrument distinguishes in a meaningful way between types of organizations is somewhat reassuring. (However, there is always the nagging possibility that the measure really taps cultural stereotypes regarding the ways in which control should be and is exercised in different types of organizations. It might be useful to ask nonmembers of an organization to evaluate the actual control exercised by members on different levels. Large differences between the responses of members and nonmembers would strengthen the instrument's

claim to validity.) It is considerably more reassuring to find that an index derived from this measure correlates rather highly (between .48 and .66) with objective measures of centralization such as the distribution of compensation and decreasing average span of control, as chapter 20 by Thomas Whisler et al. demonstrates.

In spite of the valuable contribution which these articles make to the progress of research in organizational behavior—and that contribution is highly significant—one must still ask: is the value added by binding these articles together in one volume sufficient to compensate for the redundancy involved in double publication? The answer may be "yes" for two reasons. First, the reader who is confused about the meaning of "mechanical solidarity" can learn something by studying the way in which the chapters are related to one another. Second, the purchaser who finds he has bought only thirty-seven pages of previously unpublished material plus another thirty-four pages whose publication status is ambiguous (the introduction and conclusion) may learn, once and for all, that the whole is indeed no greater than the sum of its parts.

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Electoral Participation and the Occupational Composition of Cabinets and Parliaments[1]

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This is a comparative analysis of the occupational composition of cabinets and parliaments of several countries. The following hypothesis is tested and accepted: the higher the electoral participation, the lower the proportion of political leaders recruited from business and legal occupations, but the higher the relative number recruited from other professions and from labor and party bureaucracies. It was also found that, by and large, members of parliament and cabinet ministers are not recruited from the lower middle and lower classes, even though token recruitment of the former into parliaments, but not into cabinets, was the case in most of the countries investigated.

In recent years social scientists (Rossi 1966; Clark 1967, 1968; Bell, Hill, and Wright 1961; Ehrlich 1961; Walton 1966) have emphasized the importance of comparative studies in order to determine the conditions which give rise to different kinds of "power structures." However, most comparative research in this field has been devoted to community studies, and little attention has been paid to larger political systems beyond single case studies. This exploratory analysis is an attempt to explain the variation in the occupational composition of cabinets and parliaments.

Some have suggested (Dahl 1961, p. 234; Bendix 1964, p. 88; Rossi 1966, p. 184) that the extension, and exercise thereof, of political rights to larger segments of the population, especially the lower classes, is one of the social mechanisms whereby political office may become more accessible to groups previously excluded from the exercise of political authority. On this basis I propose to test the following hypothesis: the higher the electoral participation, the lower the proportion of political leaders recruited from occupational groups from which they have usually been recruited; furthermore, the higher the electoral involvement, the higher the percentage of political leaders drawn from occupational groups from which they have not been traditionally recruited. I assume that, depending on the historical circumstances, political leaders have traditionally been landowners, businessmen, lawyers, civil servants, and military officers. Of these, only the recruitment of businessmen and lawyers will be analyzed, and the other groups will sometimes be brought into the discussion for supplementary

[1] This is a revised version of parts of chapters 3 and 4 of my Ph.D. dissertation (Wences 1967). I am grateful to William Erbe for his help in the execution of this study, to Larry Carney and Duane Denfeld for their helpful comments, and to all the researchers identified in the table sources whose work made this study possible.

purposes.[2] Occupational groups from which political leaders have not been traditionally recruited include nonlawyer professionals who lack legal skills and the economic resources of landowners and businessmen; labor leaders who depend on their union members for economic, organizational, and electoral resources necessary to run for office; party bureaucrats who came into existence with the rise of what Duverger (1963) calls the mass party; and white-collar and manual workers who constitute the lower middle and lower classes, respectively.

THE DATA

This is a secondary analysis of data gathered by the investigators identified in the table sources. The selection of countries was based on the availability of data rather than random sampling. Consequently, statistical tests cannot be used to make inferences about a universe of countries; nevertheless, they are used here for heuristic purposes only, and without the pretense of generalizing beyond these cases.[3]

Electoral participation is computed from as many elections as possible which coincide with the period of time during which leaders were studied, and by using the voting-age population as the percentage base, rather than the number of enfranchised individuals.[4] The nineteen political systems included in the study vary in voting rates, from high to low, as follows: Italy, New Zealand, Argentina, West Germany, Turkey, Israel, Sweden, Weimar Germany, France, Australia, Great Britain, Switzerland, Japan, Canada,

[2] The reason for omitting these groups from this analysis is that the need for control variables is much greater in their case; for example, in the case of landowners there is the need to control, at least, for the degree of industrialization and for the presence or absence of exclusively agrarian parties; in the case of civil servants there is need to control for the degree of bureaucratization of political bodies and for the presence or absence of laws which restrict or enhance their political office seeking.

[3] The dependent variable is the proportion of political leaders from a given occupation, and the independent variable is electoral participation. Therefore, if level of measurement were the only criterion determining the type of analysis to be carried out, the appropriate procedure would be to use the product-moment coefficient of correlation. However, two other assumptions for the use of parametric tests are probably not satisfied; according to Siegel (1956, p. 19), "observations must be drawn from normally distributed populations . . . [and] these populations must have the same variance." For this reason, I have chosen to analyze the data by means of Spearman's rho.

[4] The sources from which voting turnout was computed are found in Appendix A of Wences (1967). The mean voting turnout was computed for presidential elections only, if they do not coincide with parliamentary ones. The elections included fall in the following periods of time: Argentina, 1946–58; Australia, 1903–58; Ceylon, 1947–60; France, 1902–65; Weimar Germany, 1918–33; West Germany, 1949–65; India, 1957–62; Ireland, 1922–48; Israel, 1949–61; Italy, 1948–63; Japan, 1947–60; Mexico, 1917–58; New Zealand, 1935–60; Sweden, 1948–60; Switzerland, 1919–47; Turkey, 1950–61; and the United States, 1900–64. The only exception made in the computations was Switzerland, where women were excluded because they are disenfranchised. Since this inequality cuts across socioeconomic lines, I felt justified in omitting them.

Ireland, Ceylon, the United States, Mexico, and India. Electoral involvement ranges from a high of about 90 percent in the first three countries to a low of about 50 percent in the last two, while the median is 79 percent.

Although my concern is to try to explain the cross-sectional variation in the occupational composition of cabinets and parliaments, not the variation in voting turnout, the latter should be briefly explored. In the first place, data about Italian and Argentine leaders were gathered when voting was compulsory; and their electoral participation is therefore high. In Australia compulsory voting began with the 1925 election, but her voting rate is classified here as medium because it was computed for previous elections to coincide with the period of time during which political leaders were studied. Since 1925 voting turnout in Australia has been about 90 percent, as in Italy and Argentina. But, as demonstrated by New Zealand, compulsory voting is not a necessary condition for a high public involvement in the electoral process.

Second, in view of the positive association between voting and social class (as summarized by Milbrath 1965, pp. 110–28), other conditions being equal, countries with different class structures ought to differ in electoral participation; those with larger lower classes ought to be low in voting rates. However, Russett et al. (1964; p. 83) report that, whereas "in the United States and Western Europe it has generally been found that voting participation is highest among citizens of high education, income, and social status. . . . The most cursory examination [of data from 100 countries] will show that this finding *within* countries does not apply in any consistent way *between* countries. There is a clear correlation between per capita G.N.P. and electoral participation (r = .47) but there are many obvious exceptions." It is assumed that a high income per capita indicates a smaller lower class. The relationship between per capita income and electoral participation found in my sample is graphically portrayed in figure 1, but the correlation is only 0.18. As expected, compulsory voting results in very high voting rates, independent of income per capita. Furthermore, voluntary voting registration and residence rules found in the United States override the advantage of the highest income per capita, lowering electoral participation. If we exclude Italy, Argentina, and the United States, the correlation jumps to 0.47, but still income per capita explains only a small part of the variance in electoral participation.

CABINETS

Data about the occupational composition of cabinets from fourteen countries are analyzed in table 1. The correlations between electoral participation and the percentage of cabinet ministers who are (1) businessmen and (2) labor leaders and party bureaucrats (combined by several researchers) are not statistically significant, but in the case of lawyers the correlation is negative and significant and in the case of other professionals positive and also significant. In other words, the higher the voting turnout, the lower the relative number of ministers recruited from the legal profession, and the

larger the proportion drawn from other professions. The recruitment of lawyers is more accurately predicted on the basis of electoral involvement in the United States, Canada, Ceylon, Mexico, France, Weimar Germany, Turkey, West Germany, and New Zealand. India, Australia, Argentina, and Italy contribute most of the variance left unexplained. On the other hand, Mexico, Italy, Weimar Germany, and New Zealand contribute most of the unexplained variance vis-à-vis other professionals; and more accurate predictions are made for the other countries.

The most striking finding regarding labor leaders and party bureaucrats is not only the lack of a significant correlation but also that in seven

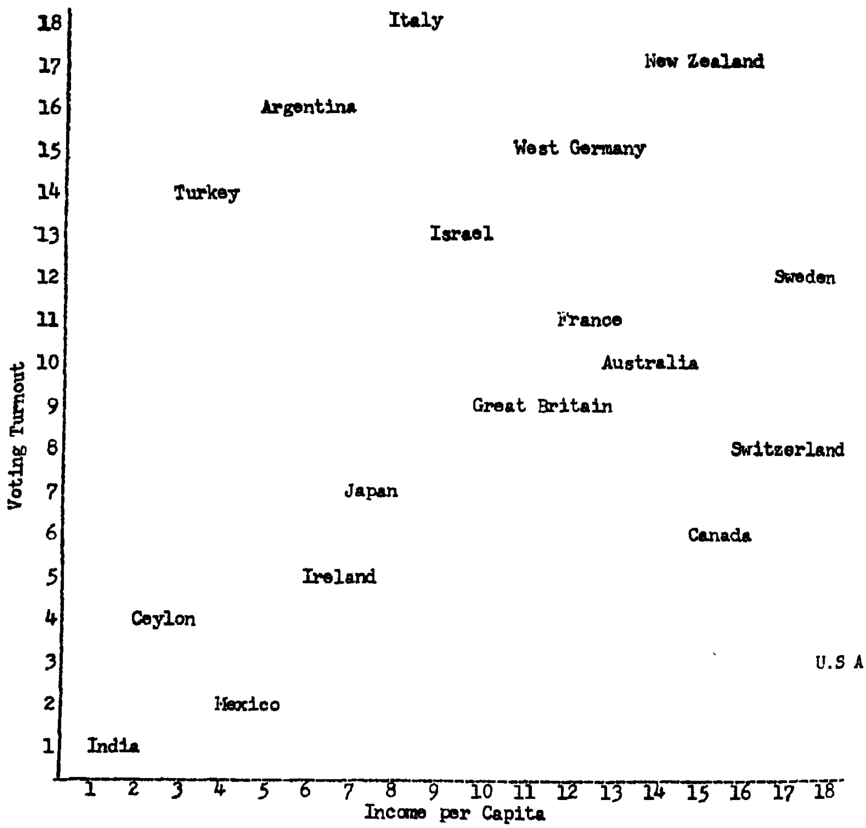


FIG. 1.—Correlation between per capita income and electoral participation (in ranks; rank 1 = lowest value). Sources: for income per capita, International Bank for Reconstruction and Development (1968); for voting, see n. 4. Weimar Germany is not included. The income per capita is as follows (in U.S. dollars): Italy, $1,030; New Zealand, $1,930; Argentina, $780; West Germany, $1,700; Turkey, $280; Israel, $1,160; Sweden, $2,270; France, $1,730; Australia, $1,840; Great Britain, $1,620; Switzerland, $2,250; Japan, $860; Canada, $2,240; Ireland, $850; Ceylon, $150; United States, $3,520; Mexico, $470; and India, $90.

countries—Argentina, West Germany, Ceylon, Turkey, Canada, the United States, and Mexico—they have, by and large, no access into the highest political office, regardless of voting rates. Their recruitment, as expected, is heavily dependent on the electoral success of left-wing parties closely identified with labor organizations. For example, the German Social Demo-

TABLE 1

THE CORRELATIONS BETWEEN ELECTORAL PARTICIPATION AND THE PROPORTION OF CABINET MINISTERS WHO ARE (1) BUSINESSMEN, (2) LAWYERS, (3) OTHER PROFESSIONALS, AND (4) LABOR LEADERS AND PARTY BUREAUCRATS

Country	Voting Turnout (%)*	N†	Cabinet Ministers (%) Who Are: Businessmen	Lawyers	Other Professionals	Labor Leaders and Party Bureaucrats
Italy	93	102	8	33	40	11
New Zealand	92	416	18	18	21	14
Argentina	87	162	2	37	32	2
West Germany	85	44	23	16	24	2
Turkey	84	298	5	19	26	0
Weimar Germany	80	92	16	31	12	11
France	80	427	12	37	38	...‡
Australia	79	243	16	16	21	16
Great Britain	78	185	25	...§	...§	15
Canada	72	88	18	60	8	2
Ceylon	64	152	28‖	40	16	0
United States	60	176	21	70	4	0
Mexico	54	33	0	39	27	3
India	50	160	4	29	16	14
Mean	...	...	13.8	34.2	21.2	6.9
Rho	...	...	−.02	−.45	.52	.10
Level of significance#	...	...	N.S.	.05	.04	N.S.
			For Countries with Large Western European Populations			
Rho	...	...	−.54	...	...	...
Level of significance	...	...	.05	...	...	...

SOURCES.—Italy, 1946–63 (Lotti 1963, p. 198); New Zealand, 1856–1935 (Webb 1940, pp. 62–63), 1935–57 (Campbell 1958, p. 66); Argentina, 1947–60 (Silvert 1966, pp. 98–99); West Germany, 1949–60 (Schmidt 1963, p. 175); Turkey, 1920–54 (Frey 1965, p. 283); Weimar Germany, 1918–33 (Knight 1952, p. 41); France, 1898–1940 (Dogan 1961, tables following p. 72); Australia, 1909–59 (Encel 1961, p. 32); Great Britain, 1916–55 (Guttsman 1965, p. 107); Canada, 1940–60 (Porter 1965, p. 390); Ceylon, 1947–60 (Singer 1964, p. 171); United States, 1877–1934 (Matthews 1954, p. 30); Mexico, 1924–28, 1930–32, 1946–52 (Portes Gil 1961, pp. 552, 559, 573); India, 1952–62 (Verma 1965, p. 155).

* See text, n. 4, for the elections from which turnout was computed.

† N may refer to seats instead of persons when data were reported for each cabinet separately.

‡ Combined with white-collar workers in the source.

§ Lawyers were combined with other professionals in the source.

‖ Includes owners of rubber and tea plantations.

\# When N is equal to or larger than 10, Blalock (1960, pp. 318–19) suggests computing

$$z = \frac{\text{rho}}{1/\sqrt{(N-1)}}\,.$$

cratic party was more successful in its quest for cabinet positions during the Weimar Republic than from 1949 to 1960; consequently, in the first period ten of the ninety-two ministers were union officials, contrasted with only one out of forty-four in the latter.

If we pay close attention to the recruitment of businessmen, some interesting findings emerge which clarify why there is no significant correlation when all the countries are included in the analysis. In India and Mexico electoral participation is extremely low, and yet only 4 percent of the Indian cabinet ministers and none of the Mexican are drawn from the business world, thus completely upsetting the anticipated correlation. If we narrow our line of inquiry to countries with large western European populations, where voting rights have been exercised for a longer period of time and where there is a higher degree of industrialization—thus eliminating from the comparison India, Mexico, Ceylon, and Turkey—we learn that the correlation is negative and statistically significant. Here we are confronted with the possibility that political recruitment in these countries may be confined more to landowners than to businessmen because of the importance of agriculture in the economy. In Ceylon businessmen are combined with landowners because some of the latter are also traders in rubber and tea. At any rate, 28 percent of the cabinet ministers are businessmen or landowners (one of the highest percentages), and electoral participation is low. In India, although only 4 percent are businessmen, 17 percent are landowners; and their combined numerical strength is comparatively high as predicted by electoral participation. In Turkey 5 percent are businessmen and 4 percent are landowners; and in Mexico there are neither businessmen nor landowners in the cabinet. It is apparent, then, that only for Turkey and Mexico is electoral participation irrelevant for the recruitment of businessmen or landowners. This may be due to the policies of the dominant political party, the Party of Revolutionary Institutions in Mexico and the Republican People's Party in Turkey, which obstruct both businessmen and landowners from holding political office. Frey (1965, p. 123) states that "after consideration of their individual dossiers, it is hard to avoid the conception that the traders were included in the assembly most reluctantly and certainly minimally during the Republican People's Party era [1920–50]." In Mexico the Party Revolutionary Institutions is composed of labor, peasant, and popular sectors. The latter includes mainly white-collar unions, and there is no sector for businessmen and landowners as such.

Only in three political systems were any cabinet ministers reported as white-collar workers: New Zealand, 7 percent (no distinction was made between white-collar workers and higher civil servants); Weimar Germany and West Germany, 4 percent; and none in the other countries under investigation. Furthermore, no manual workers were reported in any of the cabinets studied. It is evident that a high socioeconomic status is, generally, a necessary condition for recruitment into national cabinets.

PARLIAMENTS

The analysis of parliaments is based on eighteen countries. Table 2 shows that the correlations between electoral participation and the proportion of members of parliament who are businessmen and lawyers are negative, but for other professionals and for labor leaders and party bureaucrats

TABLE 2

THE CORRELATIONS BETWEEN ELECTORAL PARTICIPATION AND THE PROPORTION OF MEMBERS OF PARLIAMENTS WHO ARE (1) BUSINESSMEN, (2) LAWYERS, (3) OTHER PROFESSIONALS, AND (4) LABOR LEADERS AND PARTY BUREAUCRATS

			Members of Parliaments (%) Who Are			
Country	Voting Turnout (%)*	N†	Businessmen	Lawyers	Other Professionals	Labor Leaders and Party Bureaucrats
Italy	93	2,406	9	26	29	24
New Zealand	92	873	12	11	17	18
West Germany	85	1,311	12	7	14	23
Turkey	84	2,210	15	18	29	0
Israel	83	480	3‡	8	26	...‡
Sweden	81	385	9	23§	18	17
Weimar Germany	80	?	8	3	17	31
France	80	4,828	18	17	31	8‖
Australia	79	2,342	15	13	12	13
Great Britain	78	5,587	20	20	29	19
Switzerland	76	383	11	17	15	35
Japan	74	2,121	49	12	12	15
Canada	72	604	20	37	15	3
Ireland	71	517	14	9	20	11
Ceylon	64	390	21	23	15	5
United States	60	544	29	56	13	2
Mexico	54	162	...#	28	29	...#
India	50	1,406	9	23	15	13
Mean	...	...	16.1	19.5	19.8	14.8
Rho	...	...	−.47	−.45	.30	.41
Level of significance	...	...	.03	.03	.10	.05

SOURCES.—Italy, 1946–58 (Lotti 1963, p. 161); New Zealand, 1911–35 (Webb 1940, pp. 42–47), 1935–60 (Mitchell 1961, p. 33), 1960– (Mitchell 1962, p. 145); West Germany, 1950 (Kirchheimer 1950, p. 597), 1957 (Hartenstein and Liepelt 1962, p. 50), 1961 (Kirchheimer 1966, p. 431); Turkey, 1920–57 (Frey 1965, p. 80); Israel, 1949–59 (Akzin 1961, p. 574); Sweden, 1955 (Andrén 1961, p. 58); Weimar Germany, 1929 (Kirchheimer 1950, p. 597); France, 1898–1958 (Dogan 1961, tables following p. 72), 1958–62 (Dogan 1960, p. 267), 1962–67 (Dogan 1965, p. 431); Australia, 1901–49 (Crisp 1962, p. 62); Great Britain, 1918–35 (Ross 1948, p. 77) 1945–55 (Ross 1955, p. 440), 1955–59 (Butler 1955, p. 43), 1959–64 (Butler and Rose 1960, p. 127), 1964–66 (Butler and King 1965, p. 235); Switzerland, 1935 (Rappard 1936, p. 65), 1966 (Codding 1961, p. 75); Japan, 1947–60 (Ike 1963, p. 230; Scalapino and Masumi 1962, pp. 164–95; Cole 1956, p. 62); Canada, 1945–49 (Laing 1946, pp. 513–14), 1949–53 (Williams 1952, p. 83), 1957–58 (Meisel 1962, p. 129); Ireland, 1922–48 (McCracken 1958, pp. 96–99); Ceylon, 1947–60 (Singer 1964, p. 171); United States, 1949 (Matthews 1954, p. 30); Mexico, 1955–59, Chamber of Deputies (Scott 1959, p. 193); India, 1952–62, Lower House (Verma 1965, p. 71).

* See text, n. 4, for the elections from which turnout was computed.

† N may refer to seats instead of persons when data are reported for each parliament separately.

‡ Business managers are combined with party officials.

§ Lawyers combined with high civil servants.

‖ An additional 19 percent are classified as workers and small shopkeepers.

\# No data available.

correlations are positive. In other words, the higher the public involvement in electoral politics, the smaller the relative number of parliamentarians recruited from business and legal occupations, but the larger the percentage drawn from other professions and from labor and party bureaucracies.

A large proportion of the variance in the recruitment of businessmen left unexplained by electoral involvement is accounted for by India, where we find the lowest voting turnout and one of the smallest business contingents in the parliament. No Mexican data are available for this particular example, but they would probably add considerably to the unexplained variance, as happened with the cabinets. In the other sixteen countries, however, there is a closer relationship between recruitment of businessmen and electoral involvement. Most of the unexplained variation in the recruitment of lawyers is contributed by Italy and Ireland, and for labor leaders and party bureaucrats by Turkey and Switzerland. In the case of other professionals the unexplained variance is much greater (as indicated by the fact that the level of statistical significance is only .10).

The percentage of members of parliament classified as white-collar collar workers is as follows: France, 7 percent; Italy, 6 percent; Ireland, 3 percent; Great Britain, 3 percent; the United States, 1 percent; New Zealand, less than 1 percent; and none in the other countries. In Weimar Germany 1 percent of the members are classified as either white-collar or manual workers, and in West Germany 3 percent are so classified. In addition to clerical and sales workers, small businessmen should also be considered as lower middle class; and the percentage of parliamentarians recruited from this group is 12 percent in Ireland; 9 percent in New Zealand; 6 percent in Weimar Germany; 5 percent in the Fifth French Republic (but none before); 3 percent in Canada, West Germany, and Sweden; 2 percent in Great Britain, and none in the other countries. In addition, in Australia 19 percent of the members are classified as workers and small shopkeepers. These data show, then, that the lower middle class has more access to the parliament than to the cabinet, even though such access is still largely token. However, for manual workers not even token recruitment is the case.

CONCLUSIONS

This analysis does not tell us anything concerning the behavior of political leaders, since it deals exclusively with the behavior of political systems. As a matter of fact, some sociologists (Bendix and Lipset 1957, p. 80; Mills 1959, p. 280; Rossi 1957, pp. 420–23) have pointed out that there are insurmountable difficulties when we try to explain the behavior of political leaders on the sole basis of their occupational status or some other indicator of social stratification.

The data reveal that, in general, the degree of electoral participation is negatively correlated with the relative number of cabinet ministers and members of parliament recruited from the business and legal occupational groups, but positively with the number of nonlawyer professionals, labor

leaders, and party bureaucrats. The first two groups occupy a larger share of political positions when electoral involvement is low, and the latter when it is high. However, this independent variable explains only a part of the variance of political recruitment; additional causal factors should be taken into consideration,[5] some of which I have suggested. In the first place, a low degree of industrialization may favor the recruitment of landowners over businessmen. Second, the recruitment of certain occupational groups may be hindered if some political parties have no access to a given position; for instance, the chances of finding labor leaders in the cabinet are closely related to the ability of labor or socialist parties to gain power. Third, the policies of the dominant political party in one-party systems may enhance or hinder the recruitment of some occupational groups, independent of electoral participation. Finally, an additional factor which has not been mentioned, but whose relationship to political recruitment can be determined from these data, is the scope of authority of the given political position. For example, the mean percentage of cabinet ministers who are lawyers (table 1) is 34.2 percent and the equivalent figure in the parliaments (table 2) is only 19.5 percent. In the case of labor leaders and party bureaucrats we observe the opposite tendency, whereas no trend is found for either businessmen or other professionals. Other independent variables have been suggested by Rossi (1966), and Clark (1967).

These conclusions are based on a cross-polity analysis rather than on historical evidence from the countries. However, historical data[6] from some political systems covering periods of more than fifty years substantiate our

[5] I have also found (Wences 1967) that political recruitment varies according to party system, electoral system, and the numerical strength of the working class within the major left-wing party.

[6] Guttsman (1965, pp. 38, 84, 103, 107) presents data for the 1830–1955 British cabinets. During 1830–68, 66 percent of the ministers were recruited from the landed nobility; this figure dropped to 43 percent in 1868–86, to 41 percent in 1887–1915, and to 12 percent in 1916–55. Businessmen constituted about one-fourth of the ministers in the last two periods of time mentioned. For the periods prior to 1887, Guttsman combines businessmen with high civil servants, and together they account for 20 percent and 33 percent, respectively, in the first and second periods of time investigated. Lawyers and other professionals were combined; together they accounted for 14, 24, 32, and 37 percent of the ministers, respectively.

Dogan (1960, p. 267; 1961, tables following p. 72; 1965, p. 431) studied the French deputies for 1870–1966. As late as the beginning of the Third Republic (1870s) one deputy out of three was still recruited from the landed nobility; but this number dropped to about 10 percent from 1898 to 1919. The percentage of deputies from the upper bourgeoisie was 40 percent, in the Fourth Republic 18 percent, and in the Fifth Republic also 18 percent. Prior to the Fourth Republic about one-fourth of the deputies were lawyers, and after World War II about 14 percent were lawyers.

Webb (1940, pp. 42–47) and Campbell (1958, p. 66) studied the New Zealand cabinets from 1856 to 1957. From 1856–1935, 21 percent of the ministers were businessmen, 24 percent were lawyers, and 25 percent landowners. From 1935 to 1957 the equivalent figures were 14, 12, and 19 percent, respectively. Dahl (1961, p. 11) finds that in New Haven, Connecticut, from 1784 to 1842 "public office was almost the exclusive prerogative of the patrician families. In the second period (1842–1900) . . . the entrepreneurs took over. Since then, the 'ex-plebes' rising out of the working-class or lower-middle class families of immigrant origins have predominated."

conclusion that changes in political recruitment have been closely associated with the extension of political rights to larger segments of the voting-age population, or with high electoral involvement.

It was shown that a high socioeconomic status is, usually, a necessary condition for recruitment into the higher levels of the machinery of the state; nevertheless, token recruitment of lower-middle-class persons into parliaments, but not into cabinets, appears to be the case in most countries included in this study.

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Local-Cosmopolitan Perceptions of Political Conformity: A Specification of Parental Influence[1]

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The utility of a local-cosmopolitan distinction in accounting for why individuals see themselves in agreement with their father's political views is examined with data from a survey of college students. The data reveal the following patterns: (1) cosmopolitan students are more frequently committed to political issues and more inclined to see disparities between their own partisan views and those of their father; (2) locals not only see themselves as generally conforming to their father's political beliefs but are also more disposed to consider changing their own beliefs to maintain harmonious primary group relations; (3) under conditions fostering tension or change in parent-child relations, locals tend to disagree with their father's politics, whereas such conditions do not alter the frequency of perceived disagreement among cosmopolitans. The data generally suggest that the tendency to attribute perceived political agreement with parents to pervasive parental influence and to attribute disagreement to parent-child conflict and adolescent rebellion is valid only for persons maintaining local orientations. It is concluded that future discussions of political socialization may profit from a more careful consideration of the affects of different cognitive styles.

The high level of partisan agreement between parents and children has been attributed to the strength of parental influence in early socialization as well as to apathy and and an absence of controversy in American politics (Hyman 1959, pp. 69–91; Nogee and Levin 1958; McClosky and Dahlgren 1959). As a result of these views, two themes have been stressed in the literature on political socialization. The first sees parent-child agreement on politics as a "natural phenomenon," one to be expected in a relatively non-salient arena of socialization—and, consequently, a normal condition that does not warrant careful examination. A second and related theme is frequently more explicit: if agreement between parents and children on politics is expected as a normal sequence of events, then, when children deviate from parental political views, this deviation may be associated with some disturbance in family relations capable of stimulating rebellion or dissent in a normally unimportant arena of concern (Maccoby, Matthews, and Morton 1954; Middleton and Putney 1963*a;* Ball 1964). The present paper questions an assumption common to each of these themes—that the family's influence in political socialization is uniformly important for all

[1] Funds for conducting this project were provided by the Graduate School, University of Minnesota.

individuals. The concepts of local-cosmopolitan orientations are used to illustrate how perceptions of familial influence on a child's political preferences are highly contingent on particular cognitive orientations.

INTRODUCTION

Discussions of discontinuities in family relations and their consequence for political disagreement have taken a variety of forms. Some work has focused on the relation between political rebellion and unpleasant family environments: Lasswell (1930), Maccoby and her colleagues (1954), and Middleton and Putney (1963*a*), for example, have all stressed the link between an emotionally unhappy childhood and later political disagreement or rebellion. Additional findings have suggested a related theme: where politics is seen as vital to the family's concern, rebellion is heightened (Maccoby, Matthews, and Morton 1954; Lane 1959; Middleton and Putney 1963*a*).

Similar interpretations of disagreement have been applied to another potentially disruptive aspect of family relations—social and geographical mobility. A number of studies in this regard have shown that upwardly mobile children more frequently affiliate with the Republican party than the Democratic party selected by their working-class parents (Berelson, Lazarsfeld, and McPhee 1966, pp. 90–91; Dodge and Uyeki 1962; Havemann and West 1952, pp. 117–20). Similarly, in the area of geographical mobility, the effects of mobility on political agreement are clearly suggested in Newcomb's (1943) study of Bennington (see also Hyman 1959, pp. 111–15; McClosky and Dahlgren 1959).

Common to these widely held views is the assumption that sensitivity to family influence is similar for every individual. Hence a useful model for the analysis of political conformity: if family relations are disrupted children will tend to disagree with their parents, and if they are not disrupted children will tend to agree with their parents. Yet, in light of the diverse work on dependence and independence in social relationships, there is reason to question this very basic assumption. Strodtbeck's (1958) material on independence in child rearing, Gouldner's (1959) more general comments on autonomy, as well as Merton (1959, pp. 371–79) and Goode's (1960) remarks on insulation from social influence all have criticized the essentially functionalist perspective that individuals (or groups) are equally interdependent. Each has called for specification of the range of variability in interdependence.

The issue of interdependence as it relates to group loyalties and hence to expressions of agreement has, in one area of endeavor, been partially codified around the concepts of localism–cosmopolitanism. Generally, locals have been described as responsive to immediate primary group pressures in contrast to the cosmopolitan's sensitivity to a broader range of impersonal demands (Merton 1959, pp. 371–79). Gouldner (1957; 1958), for example, has shown that faculty committed to professional principles were least likely to express loyalty to a particular college community. Similarly, Blau and Scott (1962) have reported that persons strongly

committed to a local welfare agency were least likely to question agency directives or to consider leaving their present position. Two inferences can be drawn from these studies: (1) family or primary group influence on perceived political agreement may be negligible for persons maintaining a cosmopolitan orientation, and, therefore, (2) ruptures in primary group relations may cause perceptions of disagreement only for those sensitive to these relations, that is, persons maintaining a local orientation.

The present study is an attempt to assess the relationship between local-cosmopolitan orientations among college students and perceptions of agreement with parental political opinions (cf. Stinchcombe 1968 for an alternative discussion of local-cosmopolitan experience and political beliefs). In line with previously cited work, we expect students with a local orientation to be more inclined to express acceptance of their parents' political opinions than students with a cosmopolitan orientation. Greater political conformity is anticipated chiefly because persons holding local orientations should interpret the world in terms of its personal relevance, link these interpretations to primary communities, and hence limit the number of reference groups available to them. Conversely, persons with more cosmopolitan values should tend to be less oriented to their immediate milieu, allowing them a broader range of actual or potential reference groups. Their political opinions should, consequently, be based less on the criterion of what significant others, particularly their parents, think. To the extent that parents are less important criteria in the formation of the cosmopolitan's political preferences, ruptures in family bonds should not bear as much relevance to the formation of these preferences.

The data to be presented will attempt to examine the following questions: (1) Are students with local orientations more inclined than students with cosmopolitan orientations to see themselves as agreeing with their fathers' political party preferences? (2) Is the anticipated overall relationship between local-cosmopolitan orientations and perceived agreement maintained under conditions generally employed as alternate explanations of political agreement in the family?

RESEARCH PROCEDURES

SAMPLE

Data for the study were drawn from questionnaires administered to students enrolled in introductory sociology classes at the University of Minnesota.[2] The questionnaire was completed by 1,374 students. Of these, the majority were from a large urban metropolis and from predominantly white-collar, Protestant families; 90 percent were between the ages of

[2] In that the respondents in no sense constitute a random sample, the use of tests of statistical significance is questionable. If a χ^2 (two-tailed test) is applied, however, then the findings reported in tables 1 and 2 as well as the findings standardized on the test factor in tables 3, 4, and 5 are significant at the .001 level.

eighteen and twenty-one, and virtually all were white. In that sex differences did not alter any major findings, separate analyses for males and females are not reported.

COGNITIVE ORIENTATIONS

Measures for the independent variable, local and cosmopolitan views, were culled from a larger scale developed by Thielbar (1966). Respondents were asked to indicate their affinity for each of ten separate scale items by checking one of five alternatives ranging from "strongly agree" to "strongly disagree." Subsequent factor analysis of the scale revealed a number of orthogonal factors, among them the dimension considered most closely related to our interpretation of the local-cosmopolitan aspects of an individual's belief system.[3] This factor included the following items:

1. The national debt is similar to an individual's personal debt and should be paid off as soon as possible.
2. I prefer a newspaper that has lots of local news items.
3. Above all else, friendly neighbors make a good town.
4. These days it makes more sense to think of yourself as a citizen of your local community than as a citizen of the world.
5. I wish that we could teach the American way of life to all the underprivileged people of the world so they would be more like us.

Agreement with the items was interpreted as an orientation toward personalizing the environment by means of projecting individualistic and personal conceptions onto complex current events and by underscoring the virtues of the local, friendly community. More generally, the items were taken to reflect a broad affinity for primary group perspectives and relations.[4]

The final summary index was determined by simply cumulating the separate item scores. To isolate relatively pure types from this preliminary version of the scale, the distribution of scores was divided into three groups —cosmopolitans, intermediates, and locals—with the extreme categories each containing approximately 25 percent of the sample.[5] In that the pri-

[3] The intercorrelation matrix was factored using a principal component analysis, and the resulting factors were rotated by means of the varimax method. Given the assumption of linearity required by factor analysis, its use in this instance is taken as nothing more than suggestive.

[4] In a factor analysis of well over 100 items bearing on the concepts of local-cosmopolitan orientations, Thielbar (1966) identified a similar dimension with a nearly identical set of items. He refers to the dimension as "primarycentrism":

"What is suggested here is an orientation to communal norms and primary social relations, and, further, a tendency to interpret the world outside of the sphere of primary communal relations in terms of norms and values most appropriate to primary interaction, e.g., the tendency to view the national debt as analogous to the individual's debt. The desire to teach the American Way indicates a personalizing of complex issues involving institutional and inter-group relations which appear to be very unlike processes of primary interaction and communal life. This concept implies more than is usually implied by ethnocentrism, which is taken to mean interpretation of the world in terms of in-group values. It implies interpretation of the world in terms of primary group values; therefore, the designation 'primarycentrism' seems appropriate" (p. 354).

[5] In that the specific items are intended to reflect a local orientation, cosmopolitanism is,

mary concern of this research was to isolate the effects of dual orientations to the social environment, the analysis will focus on the extreme groups. This may be a necessary step for, unless some understanding is first gained of how the orientations operate in relatively "pure" states, it may be difficult to assess the effects of the more ambiguous intermediate category.

PERCEIVED POLITICAL AGREEMENT

To measure political attitudes, students were asked: "Which of the following comes closest to your own political preferences?" The following forced-choice alternatives were provided:[6]

1. Conservative Republican
2. Middle-of-the-road Republican
3. Liberal Republican
4. Conservative Democrat
5. Middle-of-the-road Democrat
6. Liberal Democrat
7. Socialist
8. No political preference
9. Other_____

At a separate point in the questionnaire, students were asked to estimate from these alternatives the political preferences of their father. Perceived agreement was scored if students checked for their father a category identical to their own position.[7] Persons with no political preference were eliminated from the analysis.[8]

It should be emphasized that the indicators of agreement are based on the perceptions of individual respondents. As is the case in other studies of political influence and agreement, no independent data were available on the father's political position. This omission is not necessarily an important defect if perceptions are treated as significant elements in their own

in effect, a residual category. The data to be reported in table 1 lend some justification to this interpretation; yet, recent research has suggested that the two orientations may not be as antithetical as initially anticipated (see, for example, Goldberg, Baker, and Rubenstein 1965).

[6] Responses to this item were moderately well correlated (gamma = +0.42) with an independent measure of liberalism-conservatism, thus indicating the utility of these alternatives as an index of student political opinion. The liberalism-conservatism scale contained the following items: (1) "government should be responsible for medical care for the aged"; (2) "all public utilities should be nationalized"; (3) "welfare programs stifle individual initiative"; (4) "a government that governs least governs best"; (5) "you can't legislate change; it must come from the people."

[7] In that a separate index of perceived agreement with mothers did not appreciably alter any of the reported findings, only the fathers' preferences are used and presented.

[8] Approximately 21 percent of the respondents were unable to provide adequate information on their own political preferences or those of their parents. Of these, forty-two cases involved the mother and were included in the analysis, thus bringing the number of usable respondents up to 82 percent of the total sample. The majority of the remainder of cases responded by stating "no preference" to the items on their father's or their own political beliefs; all cases involving "no preference" and other missing or inadequate information were eliminated from the analysis.

right, disposing individuals to maintain or modify their behavior in important ways. Furthermore, since our central concern is on the respondents' cognitions, their perceptions become critical. Two additional points are worth mentioning in regard to the perceptual basis of the dependent variable. First, the father's reported political party preference appeared to be reasonably distributed according to social status: 64.5 percent of those in the upper middle class estimated their fathers to be Republican, as compared to 52.4 percent in the lower middle class and 24.9 percent in the working class.[9] Second, there is no evidence to suggest that the father's reported political position is confounded with the independent variable: The distribution of fathers among the political alternatives previously listed was virtually identical for locals, intermediates, and cosmopolitans.

LOCAL-COSMOPOLITAN ORIENTATIONS: SOME CORRELATES

In line with previous research on locals and cosmopolitans, we would anticipate, if our operational definitions are valid, that locals should be more responsive than cosmopolitans to well-established primary group demands —even at the cost of negating particular desires or principles to which they adhere.

The data generally support this expectation. For example, in an attempt to gauge the pressures evolving from family ties and the adolescent society, respondents were asked whether they would join a particular club or organization highly attractive to them but unacceptable to their parents. Table 1 shows that nearly one-half of the locals state they would acquiesce to their parents' views as compared to about one-fifth of the cosmopolitans. An additional item illustrated a similar pattern of reliance. In answer to a hypothetical question on their anticipated reaction to disagreement with their spouses on politics (see table 1), 37 percent of the cosmopolitans stated they would attempt to change their spouses' views, whereas only 19 percent of the locals answered in this way.

These responses are in line with the conception that locals place greater priorities on personal relationships than on ideological principles. More direct evidence on this point, as it pertains to political commitments, is available by comparing locals and cosmopolitans in their responses to an item on the sacrifices they would make in defending their political beliefs. The following alternatives were listed: (*a*) "getting into a fight with a friend," (*b*) "giving up a good part of your leisure time," (*c*) "getting a good job," (*d*) "going to jail."[10] Responses were summed into a "political commitments" index and ranked into high, moderate, and low commitment groups. Table 1 shows that cosmopolitans are generally more inclined than locals to make sacrifices in defense of their political commitments—a

[9] The class position of the student's family of orientation was measured and delineated with reference to Hollingshead's (1957) Index of Social Position: middle class (classes I and II); lower middle class (class III); working class (classes IV and V).

[10] The specific item preceding these alternatives was worded as follows: "Certain political principles are so important that I would advocate them even at the cost of . . ."

pattern in keeping with their willingness to enter into conflict with parents and spouse.

While these data do not clarify why locals are hesitant to enter into interpersonal conflict or are hesitant to take risks in support of their political beliefs, there is some evidence pointing to a tradition of maintaining harmony on political beliefs in the local's family. Of those cases, for example, where beliefs were reported for both parents (see table 1), 47 percent of the cosmopolitans' parents disagreed in their political preferences compared to 30 percent of the locals' parents—thus minimally suggesting that cosmopolitans are less exposed to homogeneous political attitudes in their immediate nuclear family.[11]

TABLE 1

SOCIAL CORRELATES OF LOCAL-COSMOPOLITAN ORIENTATIONS

	Cognitive Orientations (%)		
Social Correlates	Cosmopolitan ($N = 286$)[a]	Intermediate ($N = 617$)	Local ($N = 229$)
A. Parents against joining organization:			
Definitely would join	31.8	20.6	15.4
Probably would join	45.9	46.2	37.3
Probably would not join	22.3	33.2	47.4
B. Spouse holds contrary political views:			
Maintain views and attempt to change spouse	37 0	30.2	18.8
Maintain views and avoid discussion	42.8	45.4	52.0
Modify beliefs to coincide with spouse	20.3	24.4	29.3
C. Political commitments:			
High	53.1	30.0	22.7
Moderate	30.1	38.7	34.1
Low	16.8	31.3	43.2
D. Father-mother political agreement:			
Parents agree	53.5	63.2	70.3
Parents disagree	46.5	36.8	29.7

[a] N's may vary slightly from item to item due to missing information; in item D, however, the lack of information on the political preferences of mothers reduced the base to $N = 1{,}090$.

LOCAL-COSMOPOLITAN ORIENTATIONS AND POLITICAL CONFORMITY

The data presented are in line with the view that individuals with local orientations are less committed to self-determined principles and more dependent on primary group relations. It follows from this interpretation that locals should be more inclined than cosmopolitans to see themselves

[11] Previous research has suggested that when parents agree on the same political party, children are likely to be strong advocates of that position. Our own findings indicate, however, that differences in political conformity between locals and cosmopolitans are not altered by the extent to which their parents agree in their political views (see Campbell, Gurin, and Miller 1954; Nogee and Levin 1958).

in agreement with their fathers' political views. The data in table 2 are consistent with this hypothesis: approximately one-third of the cosmopolitans see themselves in agreement with their fathers' political position in comparison to almost one-half of the locals.[11] While the differences are not substantial, they further support the premise that *students with local orientations are more sensitive to primary group criteria in selecting their political positions.*

To further test the utility of this premise in accounting for perceived partisan agreement, the relationship between local-cosmopolitan orientations and agreement was reexamined under three conditions. These conditions have generally been used to account for disagreement from parental political views and are taken here to reflect (1) the status of the transmitter of political norms in the family, (2) the context in which the norm

TABLE 2

LOCAL-COSMOPOLITAN ORIENTATIONS BY PERCEIVED POLITICAL AGREEMENT WITH FATHER

Cognitive Orientations	Percentage of Agreement with Father
Cosmopolitan ($N = 286$).....	31.5
Intermediate ($N = 617$).....	39.9
Local ($N = 229$)............	48.5

was transmitted, and (3) the nature of the norm itself. Specifically, the conditions were: (1) social status and mobility, (2) the emotional climate of the family, and (3) the father's political beliefs. Each condition can be interpreted as affecting strain or harmony in the family.

There is reason to believe that the association between cognitive orientations and perceived agreement should occur only in the context of harmonious family relations. If students with local orientations are disposed to rely on primary group criteria for selecting their political views, they should see themselves as disagreeing with their fathers most frequently when relations are strained. Cosmopolitans are presumably less sensitive to primary group criteria; familial conditions should not, therefore, appreciably alter their frequency of agreement. From this view, we anticipate some specification of the original association between agreement and cognitive orientations—due, chiefly, to the reactiveness of students with local orientations to elements of harmony or strain in family relations.

[11] A more conservative definition of the dependent variable—perceived agreement with the father's *political party*—reveals the same pattern reported in table 2 but in more abbreviated form: 90 percent of the locals see themselves in agreement with their fathers' choice of party as compared to 86 percent of the intermediates and 77 percent of the locals.

SOCIAL STATUS AND MOBILITY

Previous research has suggested that occupational mobility is associated with social and psychological strain (Dynes, Clarke, and Dinitz 1956; Ellis and Lane 1967). This is understandable from the perspective of mobile blue-collar adolescents: blue-collar aspirants are confronted with problems of acceptance into the matrix of relations in middle-class society as well as connected problems of acculturation to a different class-based system of attitudes and beliefs. Recent research (Litwak 1960) has indicated that the problems attending mobility are not so disruptive as to completely attenuate parent-child relations; yet there is still reason to believe that mobility is associated with some form of opinion change, as evidenced by the finding that mobile working-class children are more likely to belong to the Republican party than the Democratic party typically selected by their

TABLE 3

PERCEIVED POLITICAL AGREEMENT WITH FATHER BY LOCAL-COSMOPOLITAN ORIENTATIONS AND SOCIAL CLASS

Cognitive Orientations	Percentage of Agreement with Father by Social Class: Middle Class	Lower Middle Class	Working Class
Cosmopolitan	38.5 (78)	23.4 (77)	33.6 (122)
Intermediate	41.6 (149)	37.9 (161)	39.9 (276)
Local	69.4 (36)	44.4 (72)	42.5 (106)

parents (Maccoby, Matthews, and Morton 1954; Havemann and West 1952, pp. 117–20; Berelson, Lazarsfeld, and McPhee 1966, pp. 90–91; Dodge and Uyeki 1962).

On the basis of their aspirations and education, virtually all the students from working and lower middle-class homes in our sample were upwardly mobile; hence, they provide a critical set of cases for examining the interplay among local-cosmopolitan orientations, perceived partisan agreement, and the strains introduced by mobility.

The data indicate that cosmopolitans are more likely than locals to disagree with their fathers regardless of their class origins. Yet, as illustrated in table 3, there is considerable variation in this tendency. Briefly, the relationship between orientations and perceived agreement occurs only in the middle and lower middle class but not in the working class, that is, among those with extreme mobility experience. Cosmopolitans or intermediates show no consistent relationship between perceived political agreement and the class position of their fathers. Among the locals, however, a relationship between agreement and class is apparent: approximately 70 percent of those students in the upper middle class identify themselves as agreeing with their fathers in comparison to some 43 percent in the working class. These findings suggest possible support for the interpretation that locals

are differentially reactive to the family strains introduced by mobility. It is conceivable, however, that the data may only reflect greater sensitivity among locals to the low social status of their fathers;[13] nonetheless, the findings conform to the general view that locals are more inclined than cosmopolitans to relate political decisions to various characteristics of their families.

EMOTIONAL CLIMATES

It is possible to move to a less inferential examination of the effects of strain by tapping the family's emotional climate, particularly the actual satisfactions derived from family experience. There is ample precedent for this approach. Students of mobility have repeatedly used estimates of family climates to explain extreme aspirations and pronounced disruptions

TABLE 4

PERCEIVED POLITICAL AGREEMENT WITH FATHER BY LOCAL-COSMOPOLITAN ORIENTATIONS AND HAPPINESS EXPERIENCED IN CHILDHOOD

	Percentage of Agreement with Father by Happiness Experienced in Childhood	
Cognitive Orientations	Happy Childhood	Unhappy Childhood
Cosmopolitan	33.8 (142)	30.0 (140)
Intermediate	42.0 (343)	36.4 (261)
Local	56.6 (136)	35.6 (87)

of family continuity (Warner and Abegglen 1955; Dynes, Clarke, and Dinitz 1956). By linking unsatisfactory family experiences in childhood to adolescent political rebellion, Middleton and Putney (1963*a*) have introduced a similar approach to the analysis of political socialization.

To examine the effects of family experience, respondents were asked: "Taking all things together, how happy would you rate your childhood?" Answers to a seven-item checklist were dichotomized into a happy and unhappy group. Table 4 reports the relationship between local-cosmopolitan orientations and perceived agreement by these evaluations of childhood experience. The data illustrate that the association between local-cosmopolitan orientations and perceived agreement holds only among students who see their childhood as happy. Furthermore, the attenuation of the association between orientations and agreement among those with an unhappy childhood is due almost solely to the lesser conformity registered by the locals. This is again consonant with the view that locals are more reactive to

[13] Previous research has indicated that working-class fathers are less likely than middle-class fathers to be identified as exerting influence in the home (see Ellis and Lane 1963; Bowerman and Elder 1964).

primary group tension and strain. In that both the cosmopolitans and those intermediate on the scale are apparently unresponsive to reflections of happiness in childhood, it would be difficult to label their higher levels of disagreement as acts of rebellion. Rather, our data indicate that the rebellion hypothesis holds primarily for the locals.

Conceivably, analyzing the data by satisfactions experienced in childhood may not provide the most exacting test of rebellion and perceived disagreement among locals and cosmopolitans. As Lane (1959) has suggested, rebellion against politics is less relevant in homes where political issues lack salience; hence, the salience of politics in the family may be considered as a relevant condition focusing rebellious tendencies among adolescents. This interpretation has received support in Middleton and Putney's (1963*a*) analysis of political conformity between college students and their parents: in homes where politics was salient, the level of reported happiness was directly related to agreement with parents; where politics was not salient, happiness and agreement were unrelated.

Our data failed to replicate Middleton and Putney's results. Students from homes where politics was salient were more likely to agree with their parents than students from homes where politics was not salient (McClosky and Dahlgren 1959; Campbell et al. 1960). Further, when happiness and agreement were examined by salience, there was no interaction effect as anticipated on the basis of Middleton and Putney's findings: happiness does not differentially explain agreement in politically salient or nonsalient homes.

It is instructive to note that the high level of disagreement among locals experiencing an unhappy childhood is not appreciably altered by the degree of political salience in the home. Clearly, if disagreement among locals is to be interpreted as an act of political rebellion, then they should be most inclined to disagree when politics is deemed critical to the family's concerns. This is not the case, thus suggesting that while rebellion may still be a useful interpretation of disagreement among unhappy students with a local orientation, *political rebellion* is probably an inappropriate interpretation. It appears more likely that perceived disagreement among the unhappy locals is part of a general pattern of disaffection where politics is one of many points used to express rebellious inclinations.

POLITICAL PREFERENCES

The last condition examined was the effect of the father's political preferences on perceived conformity. Previous work in this area has generally revealed a uniform pattern: college students typically adopt a more liberal political position than their parents (Newcomb 1943; Edelstein 1962; Middleton and Putney 1963*b*) (for conflicting evidence see Nogee and Levin 1958; Dodge and Uyeki 1962; McClintock and Turner 1962). This has been interpreted as an aspect of the generational transition from more to less traditional postures. In our sample, the trend toward political liberality was pronounced: 68 percent of those who disagreed with their

fathers selected a more liberal preference.[14] Furthermore, the best predictor of agreement in the study was the father's political position: 26 percent ($N = 266$) agreed with fathers identified as conservative, 37 percent ($N = 582$) agreed with fathers identified as middle of the road, and 59 percent ($N = 239$) with fathers identified as liberal.

Given this strong drift to liberal positions, it would appear reasonable, following Newcomb (1943), to assume the development of cross pressures on students from politically conservative homes. These students are confronted, on the one hand, with demands evolving from a liberal college culture and, on the other hand, with demands evolving from a politically conservative family tradition (cf. Levin 1961 and Langston 1967 for more exacting work regarding the effects of social climates on political beliefs). Davis (1940) has suggested that such cross pressures introduce conflict into parent-child relations. Similarly, Geiger (1960) has observed strains in

TABLE 5

PERCEIVED POLITICAL AGREEMENT WITH FATHER BY LOCAL-COSMOPOLITAN ORIENTATIONS AND FATHER'S POLITICAL POSTURE

	PERCENTAGE OF AGREEMENT WITH FATHER BY FATHER'S POLITICAL POSTURE		
COGNITIVE ORIENTATIONS	Conservative	Middle of the Road	Liberal
Cosmopolitan	18.3 (60)	26.1 (138)	52.7 (74)
Intermediate	24.0 (146)	40.7 (322)	58.8 (114)
Local	36.7 (60)	46.7 (107)	68.6 (51)

family relations resulting from the discrepant political attitudes of parents and adolescents. If strain were an outcome of discrepant political views, locals from conservative homes should be (1) more sensitive than cosmopolitans from conservative homes to the strain emerging from the cross pressures between their family's beliefs and the dominant trends at the university, and, consequently, (2) more inclined to react with higher levels of disagreement. The data on responses among locals to spousal pressures suggest that their political stance is sufficiently flexible for such reactions; the data on social class suggest that their reactions may indeed derive from discrepancies between their home and the university milieu.

Our findings do show that locals from conservative homes more frequently disagree with their father's politics than locals from liberal homes, thus suggesting that students with local orientations indeed succumb to the dominant liberal trends on campus. Yet, the data in table 5 indicate that local students are generally less reactive than cosmopolitan students; in

[14] In that the item on the father's and child's political beliefs included an open-ended alternative, it was not always possible to code preferences as either liberal or conservative.

fact, cosmopolitans more frequently disagree regardless of their fathers' political views.

Further analysis of these data shows no clear explanation as to why locals and cosmopolitans see themselves in disagreement with fathers of varying political commitments. Somewhat more revealing, however, are the reasons why locals and cosmopolitans conform to paternal views. If party preferences are correlated with a separate index of conservative-liberal ideology,[15] it appears that cosmopolitans more frequently than locals have a political party position consistent with their ideological position: The correlation (gamma) between political party position and ideological position is +0.62 for the cosmopolitans, +0.44 for the intermediate group, and +0.32 for the locals. Apparently, locals see themselves in agreement with their fathers even at the cost of some inconsistency with their own ideological positions; alternatively, when a cosmopolitan conforms his ideological position is likely to be more closely aligned with the political posture of his father. While the data do not indicate whether the cosmopolitan's ideological views are formed before or after the choice to politically agree with his father, the finding is at least consistent with the general conception of the cosmopolitan's more frequent reliance on abstract principles than on interpersonal pressures.

SUMMARY AND DISCUSSION

In summary, the findings seriously question whether perceived partisan agreement between parent and child can *uniformly* be understood as an issue of loyalty or disloyalty to familial traditions. Our perspective throughout has been that it may be erroneous to treat all individuals as equally dependent on family relations and equally committed to their traditions. The data presented suggest that students with local orientations place great stress on primary group relations in arriving at a particular political position: they see themselves as agreeing with their fathers when family relations appear harmonious and disagreeing when family relations appear strained. Yet, cosmopolitans do not seem to behave in a similar manner; their political positions would appear to be more a function of self-determined general principles than a response to highly particularistic group demands.

It is not our intent to depict cosmopolitans as completely independent or autonomous individuals, unresponsive to demands of any kind. The data only indicate that they are less likely to follow traditional family demands. Future research, hopefully, will document alternative agencies of socialization and control as well as possible groups of reference, which bind cosmopolitans to particular political decisions.

More generally, the data also suggest that some of the recent literature on political agreement in the family has tended to overemphasize rebellion —whether fostered by mobility or emotional dissatisfaction—in explaining

[15] See n. 6 for the particular items included in the index of conservative-liberal ideology.

why people depart from the political convictions of their parents. We have seen, for example, that the rebellion hypothesis is probably inappropriate as an explanation of the cosmopolitan's political posture. The limitation of the rebellion perspective is not only in its view of change as unnatural—hence the strong connotation of the term rebellion—but also in its tendency to slight the possibility of parents aiding in the development of values which foster deviation in their children. This possibility, as suggested in table 1, is illustrated by the tendency for cosmopolitans to come from homes where parents themselves disagree on politics. It is as difficult to discuss deviation or rebellion in such a familial environment as it is to discuss deviation in any normatively heterogeneous situation. It is conceivable, in fact, that political deviation may be permitted or even encouraged in some homes.

We have yet to identify the antecedents of local and cosmopolitan orientations. They probably lie in particular family conditions. Whatever the source, however, the data indicate that adherence to certain orientations regarding what is important and proper in social life has a notable effect on an individual's tendency to see himself in agreement with the political opinions of his father.

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Making Men Modern: On the Causes and Consequences of Individual Change in Six Developing Countries[1]

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The Project on the Social and Cultural Aspects of Economic Development at Harvard's Center for International Affairs interviewed 6,000 men from six developing countries to study the impact on the individual of his exposure to and participation in the process of national and economic modernization. To a striking degree, the same syndrome of attitudes, values, and ways of acting—such as openness to new experience, independence from parental authority, and taking an active part in civic affairs—defines the modern man in each of the six countries and in all the occupational groups of cultivator, craftsman, and industrial worker. Education is the most powerful factor in making men modern, but occupational experience in large-scale organizations, and especially in factory work, makes a significant contribution in "schooling" men in modern attitudes and in teaching them to act like modern men. Those who come from very traditional backgrounds and receive little formal schooling can, under the right circumstances, still become modern in adult life. Modern men in developing countries not only have modern attitudes, but they can be shown to behave differently. Despite popular impressions to the contrary, exposure to the influence of migration and modern institutions does not lead to psychic distress.

Since 1962 a group of my colleagues and I at Harvard University have been working to understand the impact on the individual of his participation in the process of modernization. In the pursuit of this goal we devised a com-

[1] This paper was presented at the Dallas meeting of the American Association for the Advancement of Science in the section on "Comparative Sociology and Contemporary Social Issues," December 29, 1968. My chief collaborators from the early days of the project were Howard Schuman and Edward Ryan, who served, respectively, as field directors for Pakistan and Nigeria, and David H. Smith, who was my assistant in Chile and later was assistant director of the project in Cambridge. The field work and later analysis were greatly facilitated by the work of our local collaborators in all six of the countries. We owe particular debt to Juan César and Carlotta Garcia, Perla Gibaja, and Amar Singh who were field directors for Chile, Argentina, and India, respectively, and to Olatude Oloko who was assistant field director in Nigeria. In its different aspects, stages, and settings, the research has been supported by the Rockefeller Foundation, the Ford Foundation, the National Science Foundation, and the National Institute of Mental Health. The Cultural Affairs Division of the Department of State provided local currencies to support our field work in India, Israel, and Pakistan, and the Office of Scientific Research of the U.S. Air Force supported technical exploration in problems of translation and computer analysis undertaken in Cambridge. All these organizations gave their support through the Center for International Affairs of Harvard University, which is the sponsor and institutional home of our project on the social and cultural aspects of economic development.

plex and comprehensive questionnaire touching on a wide variety of life situations and intended to measure a substantial segment of the range of attitudes, values, and behaviors we conceive as particularly relevant to understanding the individual's participation in the roles typical for a modern industrial society.[2] This questionnaire we then administered to some 6,000 young men in six developing countries: Argentina, Chile, India, Israel, Nigeria, and East Pakistan. All three of the continents containing the overwhelming majority of developing nations are represented. The sampled countries cover the range from the newest nations which have only recently won their independence to those with a long history of self-governance; from those only now emerging from tribal life to those with ancient high cultures, and from those furthest removed from, to those most intimately linked to, the European cultural and industrial social order. The men interviewed were selected to represent points on a presumed continuum of exposure to modernizing influences, the main groups being the cultivator of the land still rooted in his traditional rural community; the migrant from the countryside just arrived in the city but not yet integrated into urban industrial life; the urban but nonindustrial worker still pursuing a more or less traditional occupation, such as barber or carpenter, but now doing so in the urban environment even though outside the context of a modern large-scale organization; and the experienced industrial worker engaged in production using inanimate power and machinery within the context of a more or less modern productive enterprise. To these we have added sets of secondary school and university students who enjoy the presumed benefits of advanced education. Within and across these sample groups we exercised numerous controls in the selection of subjects and in the analysis of our data, both to understand the influence and to prevent the uncontrolled effects of sociocultural and biosocial factors such as age, sex, education, social origins, ethnic membership, past life experience, and the like.

Our interview included almost 300 entries. Some 160 of these elicited attitudes, values, opinions, and reports on the behavior of others and oneself, touching on almost every major aspect of daily life. The questionnaire included various tests of verbal ability, literacy, political information, intelligence, and psychic adjustment. In some cases it took four hours of interviewing to complete—a demanding experience for both interviewer and interviewee.

We completed our field work near the end of 1964, and since that time have been engaged in processing and then later analyzing the very substantial body of data we collected. At this time our analysis is sufficiently far advanced so that we can discern the main outlines of some of the conclusions we must draw. To present these within the rigorous limits of the time and space currently allotted for scholarly communications requires

[2] Some sixty-eight of the questions are listed, in abbreviated form, in table 1 of Smith and Inkeles 1966. A complete copy of the questionnaire may be obtained by ordering Document 9133 from the Chief, Auxiliary Publication Project, Photoduplication Service, Library of Congress, Washington, D.C. remitting $13.50 for microfilm or $117.50 for photocopies.

imposing a telegraphic style and forgoing the presentation of detail evidence to support my arguments. Each of my conclusions will addre itself to one of the main issues to which our research was directed. Each iss is presented in the form of a question to which I will assay an answer. T four main issues dealt with here should not be understood as being the on ones to which we addressed ourselves; neither should it be assumed that o data provide answers only to these questions.

1. *How far is there an empirically identifiable modern man, and what are h outstanding characteristics?*—Many social scientists have a conception the modern man, but few have submitted this conception to an empiric test to ascertain whether this type really exists in nature and to determi how often he appears on the scene. Important exceptions may be found the work of Kahl (1968), Dawson (1967), and Doob (1967). We too have o model of the modern man, a complex one including three components whi we refer to as the analytic, the topical, and the behavioral models, all which, we assumed, might well tap one general underlying common dime sion of individual modernity.[3]

We believe our evidence (presented in some detail in Smith and Inkel 1966) shows unmistakably that there is a set of personal qualities whi reliably cohere as a syndrome and which identify a type of man who ma validly be described as fitting a reasonable theoretical conception of t modern man. Central to this syndrome are: (1) openness to new experienc both with people and with new ways of doing things such as attempting control births; (2) the assertion of increasing independence from the a thority of traditional figures like parents and priests and a shift of allegian to leaders of government, public affairs, trade unions, cooperatives, and t like; (3) belief in the efficacy of science and medicine, and a general aba donment of passivity and fatalism in the face of life's difficulties; and (ambition for oneself and one's children to achieve high occupational an educational goals. Men who manifest these characteristics (5) like peop to be on time and show an interest in carefully planning their affairs in a vance. It is also part of this syndrome to (6) show strong interest and tal an active part in civic and community affairs and local politics; and (7) strive energetically to keep up with the news, and within this effort prefer news of national and international import over items dealing wi sports, religion, or purely local affairs.

This syndrome of modernity coheres empirically to meet the general accepted standards for scale construction with reliabilities ranging fro .754 to .873 in the six countries.[4] Looking at the range of items which ente into the scale, one can see that it has a compelling face validity. In add tion, the empirical outcome accords well with our original theoretic model and, indeed, with those of numerous other students of the probler

[3] This model has been sketched in a preliminary way in Inkeles 1966. A fuller account presented in Inkeles, forthcoming in Faunce and Garfinkel.

[4] Reference is to the reliabilities of the long form of the scale (OM-2) containing 1 items. Reliabilities for some of the various short forms were sometimes lower but we generally in the same range. See Smith and Inkeles 1966, p. 367.

Evidently the modern man is not just a construct in the mind of sociological theorists. He exists and he can be identified with fair reliability within any population which can take our test.[5]

To discover that there are indeed men in the world who fit our model of a modern man is comforting, but perhaps not startling. After all, we can probably somewhere find an example of almost any kind of man one might care to delineate. It is important to emphasize, therefore, that men manifesting the syndrome of attitudes, values, and ways of acting we have designated "modern" are not freaks. They are not even rare. On the contrary, there are very substantial numbers of them in all six of the countries we have studied.[6]

Furthermore, we consider it to be of the utmost significance that the qualities which serve empirically to define a modern man do not differ substantially from occupation to occupation, or more critically, from culture to culture. In constructing our standard scales of modernity we utilized a pool of 119 attitude items.[7] In each country these items were then ranked according to the size of the item-to-scale correlation, and the subset of items having the highest correlations was then selected as defining the modern man for the given country. Using this "coherence" method to construct the national modernity scales, we might have found a totally different set of items defining the syndrome of modernity in each of our six national samples. Indeed, if we used only the twenty items ranking highest in the item-to-scale correlations for each country, we could theoretically have

[5] On the basis of our experience with the longer versions of the questionnaire, we have been able to devise several short forms which permit rapid identification of the more modern and more traditional men in any population. Details on the construction and content of these short forms are given in Smith and Inkeles 1966. One of these short forms (OM-12) which has proved a highly reliable instrument is currently being used in more than twenty pure- and applied-research programs in over a dozen developing countries.

[6] Of course, when you use a scale score to designate a "type" of man, the number of men who fit your typology depends entirely on your decision as to a cutting point on both the items and on the scale as a whole. For example, in one form of our modernity scale (IM-6) a representative subset of thirty-three items is scored so that only by affirming the most decidedly modern position at the end of the theoretical continuum of alternative answers does a man get a point toward his modernity score. On this strict test, getting as many as half the answers "right" would qualify 37 percent of our Nigerian sample as "modern." If we set a higher standard, and reserve the term modern for men who get two-thirds or more of the answers "right," then only 6 percent qualify. Raising the standard still higher to require that a man get three-fourths or more of the answers "correct" reduces the pool of modern men to 2 percent of the sample. The comparable proportions qualifying as modern by this standard in our Pakistani sample are much lower, being 14 percent, 2 percent, and 0 percent, respectively. Changing the scoring standard for the individual questions would, obviously, also affect the proportions classified as modern.

[7] These included *all* questions which in our opinion measured attitudes and could be unambiguously scored as having a "modern" and a "traditional" answer. Queries which did not meet these criteria were excluded from consideration. This meant mainly background questions, information-testing items, behavioral measures, adjustment measures, and the like. For details see Smith and Inkeles 1966.

come out with six totally different syndromes, one for each country, overlapping in the least with any other. The actual outcome of the a was totally different. The probability that even one item would com the top fifty in all six countries is approximately five in a thousa actually had ten items which were in the top fifty in all six countri teen more in the top fifty in five countries, thirteen more which were set in four of the six countries. The probability that the same thir items would by chance be in the top fifty in four of the six countri infinitesimal as to make our results notable indeed.

This means that what defines man as modern in one country also him as modern in another. It argues for the actual psychic unity o kind in a structural sense and the potential psychic unity of mankin factual sense. In speaking of the unity of mankind in terms of structure, I mean that the nature of the human personality, its inner of organization, is evidently basically similar everywhere. That is, sociation of the elements or components of personality do not—and in substantial degree *cannot*—vary randomly or even relatively There is evidently a system of inner, or what might be called stru constraints in the organization of the human personality which incre probability that those individuals—whatever their culture—who ha tain personality traits will also more likely have others which "go some particular basic personality system. So far as the future is con moreover, I believe that this structural unity provides the essentia for greater factual psychic unity of mankind. Such a factual unit merely of structure but of *content*, can be attained insofar as the forces tend to shape men in syndromes such as that defining the modern m come more widely and uniformly diffused throughout the world. Thi requires that we consider the second issue to which our research ad itself.

2. *What are the influences which make a man modern? Can any sign changes be brought about in men who are already past the formative earl and have already reached adulthood as relatively traditional men?*—Edu has often been identified as perhaps the most important of the infl moving men away from traditionalism toward modernity in deve countries. Our evidence does not challenge this well-established conc Both in zero-order correlations[8] and in the more complex multivari gression analysis, the amount of formal schooling a man has had e as the single most powerful variable in determining his score on ou sures. On the average, for every additional year a man spent in sch gains somewhere between two and three additional points on a s modernity scored from zero to 100.

Our modernity test is not mainly a test of what is usually lear school, such as geography or arithmetic, but is rather a test of att

[8] The correlation (Pearsonian) between education and the overall measure of mod tion ranges from 0.34 in Pakistan to 0.65 in India. The size of these coefficients stantially affected by the educational "spread" in each sample. That spread is in India, with the cases rather evenly distributed from zero to thirteen years of edu

and values touching on basic aspects of a man's orientation to nature, to time, to fate, to politics, to women, and to God. If attending school brings about such substantial changes in these fundamental personal orientations, the school must be teaching a good deal more than is apparent in its syllabus on reading, writing, arithmetic, and even geography. The school is evidently also an important training ground for inculcating values. It teaches ways of orienting oneself toward others, and of conducting oneself, which could have important bearing on the performance of one's adult roles in the structure of modern society. These effects of the school, I believe, reside not mainly in its formal, explicit, self-conscious pedagogic activity, but rather are inherent in the school as an *organization*. The modernizing effects follow not from the school's curriculum, but rather from its informal, implicit, and often unconscious program for dealing with its young charges.[9] The properties of the rational organization as a hidden pursuader—or, as I prefer to put it, as a silent and unobserved teacher—become most apparent when we consider the role of occupational experience in shaping the modern man.

We selected work in factories as the special focus of our attention in seeking to assess the effects of occupational experience in reshaping individuals according to the model of the modern man. Just as we view the school as communicating lessons beyond reading and arithmetic, so we thought of the factory as training men in more than the minimal lessons of technology and the skills necessary to industrial production. We conceived of the factory as an organization serving as a general school in attitudes, values, and ways of behaving which are more adaptive for life in a modern society. We reasoned that work in a factory should increase a man's sense of efficacy, make him less fearful of innovation, and impress on him the value of education as a general qualification for competence and advancement. Furthermore, we assumed that in subtle ways work in a factory might even deepen a man's mastery of arithmetic and broaden his knowledge of geography without the benefit of the formal lessons usually presented in the classroom. Indeed, the slogan for our project became, "The factory can be a school—a school for modernization."

Although our most sanguine hopes for the educational effects of the factory were not wholly fulfilled, the nature of a man's occupational experience does emerge as one of the strongest of the many types of variables we tested and is a quite respectable competitor to education in explaining a person's modernity. The correlation between time spent in factories and individual modernization scores is generally about 0.20.[10] With the effects

[9] In much of the current discussion of the effectiveness and ineffectiveness of our schools, this aspect of the school's impact has been generally neglected. For an important exception see Dreeben 1968.

[10] However, in India it was only 0.08. We believe this to be not a condition peculiar to India, but to our industrial sample there. Everywhere else we sampled from fifty to more than 100 factories, including all types and sizes of industry, but in India our sample was limited to eleven factories, mostly large, and two of these were not truly industrial; they processed minerals.

of education controlled, the factory workers generally score eight to ten points higher on the modernization scale than do the cultivators.[11] There is little reason to interpret this difference as due to selection effects since separate controls show that new workers are not self- or preselected from the village on grounds of already being "modern" in personality or attitude. Nevertheless, we can apply a really stringent test by making our comparisons exclusively within the industrial labor force, pitting men with few years, of industrial experience against those with many, for example, five or more. When this is done, factory experience continues to show a substantial impact on individual modernization, the gain generally being about one point per year on the overall measure of modernization (OM).

It is notable that even when we restrict ourselves to tests of verbal fluency and to tests of geographical and political information, the more experienced workers show comparable advantages over the less experienced. To choose but one of many available examples, in Chile among men of rural origin and low education (one to five years)—and therefore suffering a double disadvantage in background—the proportion who could correctly locate Moscow as being the Soviet Russian capital rose from a mere 8 percent among the newly recruited industrial workers to 39 percent among those with middle experience and to 52 percent among the men who had eight years or more in the factory. Even among those with the double advantage of higher education (six to seven years) and urban origins, the proportion correctly identifying Moscow decidedly rose along with increasing industrial experience, the percentages being 68, 81, and 92 for the three levels of industrial experience, respectively. Summary evidence from all six countries is presented in table 1. It should be clear from these data that the factory is serving as a school even in those subjects generally considered the exclusive preserve of the classroom.[12]

To cite these modernizing effects of the factory is not to minimize the greater absolute impact of schooling. Using a gross occupational categorization which pits cultivators against industrial workers, we find that the classroom still leads the workshop as a school of modernization in the ratio of 3:2. Using the stricter test which utilizes factory workers only, grouped by length of industrial experience, it turns out that every additional year in

[11] Keep in mind that the test has a theoretical range from zero to 100, and an observed range in our samples almost as great. With samples of our size, differences so large are significant at well above the .01 level. This test of significance and many of the other statistics presented in this report require that one meet certain conditions, such as random sampling, which our data do not meet. Nevertheless, we present such statistics in order to provide a rough guide or standard of judgment, in the belief that to do so is preferable to leaving the reader without any criterion by which to evaluate one figure as against another. The reader must be cautioned, however, not to interpret any single statistic too literally. Conclusions should be drawn not from single figures but from the whole array of evidence across the six countries.

[12] It will be noted that the pattern manifested in the other five countries is not shown in Israel. There the new workers are as well informed as the experienced. We attribute this not so much to the qualities of Israeli industry as to the nature of Israeli society. In that small, mobile, and urbanized environment, information tends to be rapidly and more or less evenly diffused throughout the nation and to all classes.

TABLE 1

PERCENTAGE OF INDUSTRIAL WORKERS AMONG LOW[a] EDUCATED GIVING CORRECT ANSWERS ON INFORMATION TESTS

(BY COUNTRY AND MONTHS OF FACTORY EXPERIENCE)

	COUNTRY AND AVERAGE MONTHS EXPERIENCE											
	Argentina		Chile		India		Israel		Nigeria		East Pakistan	
QUESTION	3	90	2	96	2	72	3	84	3	48	1	48
Identify electrical apparatus[b]	37	63*	33	62***	44	76***	80	88	91	91	50	70**
Identify movie camera	60	69*	6	8	29	51**	84	88	68	70	9	37***
Cite 3 or more city problems	5	18	15	32***	0	1	24	25	30	22	52	52*
Identify international leader[c]	26	67**	47	85***	1	31***	80	81	11	17	2	26**
Identify local leader	33	51	27	81***	15	52***	67	92	70	78	52	79*
Identify Moscow	36	60*	17	67***	1	16***	86	86	11	17	2	2
Name 3 or more newspapers[d]	12	21	81	92	6	28**	75	61	81	91	20	44**
Approximate N cases	40	70	90	130	75	130	25	100	60	25	65	120

* t-test score significant at the .05 level.

** Significance at the .01 level.

*** Significance at the .001 level or better.

[a] Data for high education groups on these seven questions in each country provide an additional 42 tests of which 33 were in accord with the conclusion that men with more factory experience score higher on information tests, 7 were inconclusive, and 2 contradictory.

[b] In Pakistan, India, and Nigeria a picture of a radio was shown; in Argentina, Chile, and Israel, a picture of a tape recorder was used instead.

[c] Respondents were asked to identify Lyndon Johnson in Chile, Argentina, and Israel; John F. Kennedy in Pakistan and India; Charles de Gaulle in Nigeria.

[d] In Argentina, "name books" was substituted for "name newspapers."

school produces three times as much increment in one's modernizati score as does a year in the factory, that is, the ratio goes to 3:1. The scho seems clearly to be the more efficient training ground for individual moder ization. Nevertheless, we should keep in mind that the school has the pu full time, and it produces no incidental by-products other than its pupil By contrast, the main business of the factory is to manufacture good and the changes it brings about in men—not insubstantial, as we have seen- are produced at virtually zero marginal cost. These personality changes men are therefore a kind of windfall profit to a society undergoing t modernization process. Indeed, on this basis we may quite legitimate reverse the thrust of the argument, no longer asking why the school do so much better than the factory, but rather demanding to know why t school, with its full time control over the pupil's formal learning, does n perform a lot *better* than it does relative to the factory.

TABLE 2

VARIANCE IN SCORES OF INDIVIDUAL MODERNIZATION (OM-3) ACCOUNTED FOR BY EARLY AND LATE SOCIALIZATION INFLUENCES IN SIX DEVELOPING COUNTRIES

(%)

Variable	Argentina	Chile	India	Israel	Nigeria	Pakista
Early Socialization.....	28.8	26.0	52.4	22.1	23.0	22.2
Late Socialization......	31.6	34.4	31.4	22.4	28.2	28.3

Our experience with the factory enables us to answer the secondary que tion posed for this section. Since men generally enter the factory as more less matured adults, the effects observed to follow upon work in it clearl are late socialization effects. Our results indicate that substantial chang can be made in a man's personality or character, at least in the sense of a titudes, values, and basic orientations, long after what are usually co sidered the most important formative years. The experience of factor work is, of course, not the only form which this late socialization takes. may come in the form of travel or migration, by exposure to the media mass communication, or through later life in the city for men who grew u in the countryside.[13] We therefore combined our explanatory variabl into two main sets, one representing *early* socialization experience—as i formal schooling—and the other reflecting *late* socialization experiences— in one's adult occupation. We may observe (from table 2) that the la socialization experiences stake out a very respectable place for themselv in the competition to account for the observed variance in individu

[13] The distinctive effectiveness of each of these potentially modernizing experience and others, will be assessed in the general report of our project in preparation under t authorship of Alex Inkeles and David H. Smith, to be titled *Becoming Modern*.

modernization scores.[14] In five countries the set of late socialization variables explained as much or more of the variance in modernization scores as did the combined early socialization variables, each set explaining between one-fourth and one-third of the variance.

In India the early socialization variables were decidedly more powerful—accounting for 52 percent as against 31 percent of the variance explained by the late socialization variables. But in absolute terms, the late experiences are still doing very well.[15] All in all, we take this to be impressive evidence for the possibility of bringing about substantial and extensive changes in the postadolescent personality as a result of socialization in adult roles.

3. *Are there any behavioral consequences arising from the attitudinal modernization of the individual? Do modern men act differently from the traditional man?*—Many people who hear of our research into individual modernization respond to it by acknowledging that we may have discovered what modern man *says*, but they are more interested in knowing what he *does*. This view overlooks the fact that taking a stand on a value question is also an action, and one which is often a very significant one for the respondent.[16] Our critics' comment also tends implicitly to underestimate the importance of a climate of expressed opinion as an influence on the action of others. And it probably assumes too arbitrarily that men use speech mainly to mislead rather than to express their true intentions. Nevertheless, the question

[14] In this regression analysis we utilized as the dependent variable a long form of the modernity scale OM-3, not as described in Smith and Inkeles 1966. Using seven principal predictor variables selected on theoretical and empirical grounds, we obtained multiple correlation coefficients of from about .57 to .76 in our six countries. We could thus account for between 32.5 percent and 59.0 percent of variance in the modernity scale scores. We then grouped the predictor variables in two sets. The set of early socialization variables included ethnicity, father's education, and own formal education. Late socialization variables included occupational type, consumer goods possessed (as a measure of standard of living), a measure of mass media exposure, and age. Each set was then used alone to ascertain what portion of the variance it could explain, as indicated in table 2. A discussion of the rationale for selecting these particular variables and grouping them so, as well as details of the linear multiple regression analysis, will be presented in a later publication by David H. Smith and Alex Inkeles.

[15] An alternative approach to estimating the relative contribution of the two sets of variables is to consider the decrement in the total variance explained when either set is withdrawn from the total pool of predictors. When this was done, the late socialization variables again emerged as more powerful everywhere except in India. The following set of figures presents, first, the decrement in the total variance explained resulting from withdrawal of the early socialization variables, and second, the decrement resulting from withdrawal of the late socialization variables from the total predictor pool: Argentina .127/.155; Chile .100/.184; India .276/.066; Israel .101/.104; Nigeria .068/.120; East Pakistan .070/.131. The fact that these decrements are so much smaller than the proportion of variance explained by each set alone indicates that to some extent the sets overlap, and when one set is dropped the other "takes over" for it in explaining some part of the variance.

[16] For example, it is an act of substantial civic courage for a young man in a traditional village to tell our interviewer he would be more inclined to follow the local coop leader than the village elders, or that he considers himself more a Nigerian than an Ife, or whatever is the local tribal basis of solidarity.

is a legitimate one, and we addressed ourselves to it in our research. Al though this part of our analysis is least advanced, we can offer some tenta tive conclusions on the basis of preliminary analysis.

We have the definite impression that the men we delineate as modern no only *talk* differently, they *act* differently. To explore this relationship w constructed a scale of modernization based exclusively on attitudinal ques tions, rigorously excluding those dealing with action rather than belief o feeling.[17] This measure of attitudinal modernity we then related to the be havioral measures in our survey. In all six countries we found action inti mately related to attitude. At any given educational level, the man who wa rated as modern on the attitudinal measure was also more likely to hav joined voluntary organizations, to receive news from newspapers every day to have talked to or written to an official about some public issue, and t have discussed politics with his wife. In many cases the proportion wh claimed to have taken those actions was twice and even three times greate among those at the top as compared with those at the bottom of the scal of attitudinal modernity. Table 3 presents the relevant evidence. We shoul note, furthermore, that the items included in table 3 are illustrative of larger group of about thirty individual questions and a dozen scales selecte on theoretical grounds as appropriate tests of the relation between expresse attitudes and reported behavior. The items used for illustration were no arbitrarily selected as the only ones supporting our assumptions.[18]

The particular behaviors we cited above are all "self-reported." Th question inevitably arises as to whether then we are not merely testing atti tudinal consistency—or merely consistency in response—rather than an

[17] In the project identification system this scale is designated OM-1. It includes onl seventy-nine items selected from the larger pool by a panel of expert judges on th grounds that (*a*) they dealt only with attitudes, not information, political orientatior or action, and (*b*) they clearly were appropriate to test the original theoretical conceptio of modernity as more or less "officially" defined by the project staff.

[18] This assertion is supported by consideration of the relevant gamma statistics on th relationship of attitudinal modernity (OM scores) and information tests. For this pu pose low- and high-education groups were tested separately (except in Pakistan hence the number of gamma statistics obtained is twice the number of items usec The average gamma statistics shown below are based on three-part tables which ir cluded middle as well as low and high OM. Separate results are given for items and fo scales, since the scales show the combined effects of groups of items and hence are nc truly "independent" additional tests of the hypothesis under scrutiny.

Tests	Country					
	Argentina	Chile	India	Israel	Nigeria	Pakistan
Based on items:						
Average gamma.......	201	232	342	244	205	303
Number of tests.......	60	62	58	52	46	29
Based on scales:						
Average gamma.......	305	296	449	313	276	339
Number of tests.......	24	24	24	28	24	10

TABLE 3

PERCENTAGE OF HIGH EDUCATED[a] ENGAGING IN VARIOUS FORMS OF MODERN BEHAVIOR

(BY COUNTRY AND MODERNITY SCORE)

FORM OF BEHAVIOR	Country and Modernity Score[b]: Argentina Low	Argentina High	Chile Low	Chile High	India Low	India High	Israel Low	Israel High	Nigeria low	Nigeria High	East Pakistan Low	East Pakistan High
Joined 2 or more organizations	26	48	50	61	32	31	2	6	86	97	0	6
Voted often	54	54	44	57	60	65	76	86	..	.....	..	.....
Talked politics with wife	40	57*	29	61***	74	80	46	72**	50	65	65	83*
Contacted official about public issue	2	9	4	17**	20	26	17	27	11	21	5	15
Read newspapers daily	40	77***	31	53**	32	61**	36	81	63	84***	35	42
High on geographic information scale	44	78***	23	60***	20	51***	29	75***	7	48***	9	53*
High on political information scale	22	56***	18	37***	22	65***	36	72***	20	48***	7	39**
High on consumer information scale	10	21**	7	39***	67	94*	29	53**	84	89	23	52***
High on opposites test	50	76	36	63***	59	86***	31	57***	59	71	47	78***
Approximate N cases.[c]	50	150	60	160	55	115	40	110	60	120	45	125

* t-test based on the extremes of the continuum on each form of behavior significant at the .05 level.

** Significance at the .01 level.

*** Significance at the .001 level or better. All other t-tests of the relation were below the .01 level.

[a] In each country the total sample was divided at the median into a "high" and "low" educated group. The average number of years of education for the high group was: Argentina: 7.6; Chile: 6.6; India: 10.2; Israel: 8.6; Nigeria: 8.5; and Pakistan: 4.8.

[b] The range of Overall Modernity Scores was split into "low"—bottom 25%, "middle"—middle 50%, and "high"—top 25% for each country's *entire* sample. Modernity scores are highly correlated with education. Since in this table only the high educated are represented, more men fall into the category of those with high as against low modernity scores.

[c] Ns are approximate due to the disqualification of part of the sample on certain questions, e.g. those legally under age could not be expected to "vote often."

strict correspondence between modernity of *attitude* and modernity of *behavior*. The answer is partly given by considering the relation of attitudinal modernity to our several tests of information. These questions did not deal with "mere" attitudes, but obliged the respondent to prove objectively whether he really knew something. Quite consistently the men who were more modern on the attitude measures validated their status as modern men by more often correctly identifying a movie camera, naming the office held by Nehru, and locating the city of Moscow. Men with the same education but with unequal modernity scores performed very differently on these tests, with those more modern in attitude scoring high on the tests of information two or more times as often as those classified as traditional in attitude. The details are summarized in the lower part of table 3, which presents summary scale results.

We conducted a further and more exact check on the extent to which self-reported behavior is fact rather than fantasy by comparing what men claimed to do with objective tests of their actual performance. For example, we asked everyone whether or not he could read. Individuals certainly might have been tempted to exaggerate their qualifications. But later in the interview we administered a simple literacy test, asking our respondents to read a few lines from local newspaper stories we had graded for difficulty. In most settings less than 1 percent of the men who had claimed they could read failed the literacy test. They proved objectively to have been accurately and honestly reporting their reading ability. Similarly, men who claimed to use the mass media regularly were—as they should have been—better able to correctly identify individuals and places figuring prominently in world news. In Nigeria, for example, among experienced workers of low education, the proportion who could correctly identify de Gaulle as the president of the French Republic was 57 percent among those who claimed to pay only modest attention to the mass media, 83 percent among those who asserted they listened or read more often, and 93 percent among those who claimed to read a newspaper or listen to the radio almost every day. Many additional examples which test the internal consistency of attitude and behavior are summarized in table 4.[19] Clearly, the men who claim to have the attributes we score as modern give a better account of themselves on objec-

[19] For lack of space, table 4 shows the percentage whose behavior validated their oral "claim" only in the case of those falling at the extremes of the continuum on each "claim," and the *t*-tests are based on these same extremes. To leave no doubt that this outcome was not a fortuitous result of considering only the extremes, we note the gamma statistics for the full cross-tabulations including all steps in both the oral claim and the behavioral test. The five tests of the relation between claim and behavior applied in six countries yield a potential thirty tests, but some were inapplicable in certain instances. The procedure was repeated separately for the "low" and "high" educated, divided at the median in each country. For the low educated, where twenty-seven of the tests were applicable, the association of claim and behavior was in the expected direction in all cases, and the gammas ranged form 0.011 to 0.877, with a mean of 0.351 and a median of 0.334. For the high educated, the hypothesis could be tested in twenty-three full cross-tabulations. All but two of the associations were in the expected direction, the gammas ranging from −0.123 to 0.690, and over this range the mean gamma was 0.309 and the median 0.276.

TABLE 4

PERCENT[a] AMONG LOW EDUCATED[b] WHOSE PERFORMANCE ON A TEST OF BEHAVIOR ACCORDS WITH THEIR ORAL CLAIM

(BY CLAIM AND COUNTRY)

Objective Behavior (%) and Claim	Argentina	Chile	India	Israel	Nigeria	East Pakistan
Naming 3 newspapers among those who claim to read papers:						
Rarely/Never	c	73d (356)	13 (582)	68 (28)	59 (71)	38
Daily		98 (85) ***	60 (63) ***	90 (119)	85 (152) ***	45
Correctly identifying international leader among those claiming mainly interested in:						
Other news	43 (299)	59 (414)	8 (668)	79 (216)	7 (276)	4 (459)
World news	73 (30) **	76 (29)	12 (26)	84 (68)	8 (73)	10 (10)
Correctly identifying international leader who claim on total information media exposure they are:						
Low	14 (51)	45 (196)	1 (71)	73 (45)	4 (78)	0 (85)
High	79 (29) ***	79 (76) ***	18 (11) ***	84 (38)	17 (18) *	10 (40) **

* .05 level of significance reached in *t*-tests of the difference in the proportion manifesting a given behavior in the case of those falling at the extremes of the continuum on each "claim."

** .01 level of significance.

*** .001 level of significance.

a Percentages are a proportion of the cells' base *N* who manifested a given behavior. These cell *N*s represent all those of low education who made the indicated behavioral claim, e.g., claimed to read a newspaper daily.

b The average number of years of education by country was Argentina: 4.5; Chile: 3.7; India: 1.0; Israel: 5.1; Nigeria: 6.2; and Pakistan: .2.

c Data unavailable for country.

d Includes "a few times a week" in "rarely or never" category.

TABLE 4—*Continued*

Objective Behavior (%) and Claim	Country: Argentina	Chile	India	Israel	Nigeria	East Pakistan
Correctly identifying Washington who claim on total information media exposure they are:						
Low	14 (51) ***	43 (196) ***	3 (71)	64 (44) *	3 (78) ***	2 (85)
High	72 (29)	70 (76)	7 (28)	90 (38)	28 (18)	3 (40)
Who can read at least a little among those who claim they:						
Can read	e	e	99 (408)	99 (266)	99 (346)	74 (80)

tive tests of performance. We may conclude not only that modern is as modern does, but also that modern *does* as modern *speaks*.

4. *Is the consequence of the individual modernization inevitably personal disorganization and psychic strain; or can men go through this process of rapid sociocultural change without deleterious consequences?*—Few ideas have been more popular among the social philosophers of the nineteenth and twentieth centuries than the belief that industrialization is a kind of plague which disrupts social organization, destroys cultural cohesion, and uniformly produces personal demoralization and even disintegration. Much the same idea has been expressed by many anthropologists who fear—and often have witnessed—the destruction of indigenous cultures under the massive impact of their contact with the colossus represented by the European-based colonial empires. But neither the establishment of European industry in the nineteenth century, nor the culture crisis of small preliterate peoples overwhelmed by the tidal wave of colonial expansion may be adequate models for understanding the personal effects of industrialization and urbanization in developing nations.

To test the impact on personal adjustment resulting from contact with modernizing influences in our six developing countries, we administered the Psychosomatic Symptoms Test as part of our regular questionnaire. This test is widely acknowledged to be the best available instrument for cross-cultural assessment of psychic stress.[20] Using groups carefully matched on all other variables, we successively tested the effect of education, migration from the countryside to the city, factory employment, urban residence, and contact with the mass media as these modernizing experiences might affect scores on the Psychosomatic Symptoms Test. No one of these presumably deleterious influences consistently produced statistically significant evidence of psychic stress as judged by the test. Those who moved to the city as against those who continued in the village, those with many years as compared to those with few years of experience in the factory, those with much contact with the mass media as against those with little exposure to radio, newspaper, and movies, show about the same number of psychosomatic symptoms.

In each of six countries, we tested fourteen different matched groups, comparing those who migrated with those who did not; men with more years in the factory with those with fewer, etc. Because some of these matches did not apply in certain countries, we were left with seventy-four more or less independent tests of the proposition that being more exposed to the experiences identified with the process of modernization produces more psychosomatic symptoms. Disregarding the size of the difference and considering only the sign of the correlation between exposure to modernization

[20] Variants of the test were used with the Yoruba as reported by Leighton et al. 1963, and the Zulu as reported by Scotch and Geiger 1963–64. Details on the form of the test as we used it and the results of our investigation were presented by Alex Inkeles and David Smith to the Eighth Congress of the International Anthropological Association at Tokyo-Kyoto in September 1968 under the title "The Fate of Personal Adjustment in the Process of Modernization," and will appear in the *International Journal of Comparative Sociology*, 1970.

and psychosomatic symptoms as (+) or (−), it turns out that in thirty-four instances the results are in accord with the theory that modernization is psychologically upsetting, but in forty other matches the results are opposed to the theory. Very few of the differences in either direction, furthermore, were statistically significant. Indeed, the frequency of such statistically significant correlations was about what you would expect by chance. Of these significant differences, furthermore, only two supported the hypothesis while two contradicted it. This again suggests that only chance is at work here. We must conclude, therefore, that the theory which identifies contact with modernizing institutions and geographical and social mobility as certainly deleterious to psychic adjustment is not supported by the evidence. Indeed, it is cast in serious doubt. Whatever is producing the symptoms—and the test does everywhere yield a wide range of scores—it is something other than differential contact with the sources of modernization which is responsible.

Life does exact its toll. Those who have been long in the city and in industry but who have failed to rise in skill and earnings are somewhat more distressed. But this outcome can hardly be charged to the deleterious effects of contact with the modern world. Perhaps if we had studied the unemployed who came to the city with high hopes but failed to find work, we might have found them to have more psychosomatic symptoms. If we were faced with this finding, however, it would still be questionable whether the observed condition should be attributed to the effects of modernization. The fault would seem to lie equally in the inability of traditional agriculture to provide men with economic sustenance sufficient to hold them on the land.

We conclude, then, that modernizing institutions, per se, do not lead to greater psychic stress. We leave open the question whether the process of societal modernization in general increases social disorganization and then increases psychic tension for those experiencing such disorganization. But we are quite ready to affirm that extensive contact with the institutions introduced by modernization—such as the school, the city, the factory, and the mass media—is not in itself conducive to greater psychic stress.

Men change their societies. But the new social structures they have devised may in turn shape the men who live within the new social order. The idea that social structures influence the personal qualities of those who participate in them is, of course, as old as social science and may be found in the writings of the earliest social philosophers. Its most dramatic expression, relevant to us, was in the work of Marx, who enunciated the principle that men's consciousness is merely a reflection of their relation to the system of ownership of the means of production. The rigidity of Marx's determinism, and the counterdetermination of many people to preserve an image of man's spiritual independence and of the personal autonomy and integrity of the individual, generated profound resistance to these ideas. The idea that ownership or nonownership of the means of production determines consciousness is today not very compelling. To focus on ownership, however, is to concentrate on the impact of macrostructural forces in shaping men's attitudes and values at the expense of studying the significance of microstruc-

tural factors. Yet it may be that these microstructural features, such as are embedded in the locale and the nature of work, are prime sources of influences on men's attitudes and behavior.

In reviewing the results of our research on modernization, one must be struck by the exceptional stability with which variables such as education, factory experience, and urbanism maintain the absolute and relative strength of their impact on individual modernization despite the great variation in the culture of the men undergoing the experience and in the levels of development characterizing the countries in which they live.[21] This is not to deny the ability of the macrostructural elements of the social order to exert a determining influence on men's life condition and their response to it. But such macrostructural forces can account for only one part of the variance in individual social behavior, a part whose relative weight we have not yet measured with the required precision. When we attain that precision we may find some confirmation of popular theories, but we are also certain to discover some of them to be contradicted by the data—just as we have in our study of microstructural factors. The resolution of the competition between these two theoretical perspectives cannot be attained by rhetoric. It requires systematic measurement and the confrontation of facts however far they are marshalled in the service of ideas. The facts *we* have gathered leave *us* in no doubt that microstructural forces have great power to shape attitudes, values, and behavior in regular ways at standard or constant rates within a wide variety of macrostructural settings.

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[21] This idea is more fully elaborated in Inkeles 1960.

Racial Change in a Stable Community[1]

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A Chicago community experiencing racial transition is compared with an all-white control area to test the common assumption that transition is necessarily accompanied by a "flight" of whites, with a consequent abnormally high rate of property turnover (i.e., "instability"). It is found, through an inspection of property turnover records and by comparison of numbers of "For Sale" signs in the two areas, that the transition community shows no signs of instability. The assumption of a necessary link between transition and instability is thus rejected; implications for the goal of residential racial integration are discussed.

It is commonly assumed that residential racial succession is accompanied by a condition of "instability." First, there is instability in the obvious sense that racial composition is changing. Second, there is instability in the less trivial sense that the amount of household turnover in the area is particularly high—presumably due to a tendency for whites to "flee" a changing neighborhood (see, e.g., the summary of this view in McEntire 1960, pp. 77–87). This latter sort of instability is the focus of the present study. It is defined for operational simplicity as the extent to which the proportion of residential properties placed and sold on the housing market is appropriate to the age, housing type, location, and other nonracial characteristics of a particular area. An increase in such property turnover is often regarded not only as a partial cause of neighborhood change but as a key inhibiting factor to the development of residential racial integration in American cities. Thus, a commonly favored intervention policy in changing areas has involved an attempt to convince local whites to remain and to create the amenities which will aid in their retention (Abrahamson 1959; Biddle and Biddle 1965; Fish et al. 1966).

This research departs from this perspective and attempts to document the existence in Chicago of a large community which is experiencing racial transition while at the same time exhibiting important symptoms of remarkable stability. In the course of a two-year participant observation study of the community in question (Molotch 1968), certain evidences were uncovered which suggest that instability and racial change may be

[1] Revised version of a paper delivered at the meetings of the American Sociological Association, Boston, August 1968. Financial support was provided by a grant of the Bowman C. Lingle Foundation to the Center for Urban Studies, University of Chicago, and by a summer faculty fellowship from the University of California, Santa Barbara. The author acknowledges the comments of Morris Janowitz, David Street, and Gerald Suttles of the Center for Social Organization Studies and of Brian J. L. Berry, Jack Meltzer, and R. Joyce Whitley of the Center for Urban Studies. John Dyckman, Jr., assisted in gathering data.

two distinct community phenomena—at least in Chicago in the mid-1960s. If correct, such a proposition would indicate that it is quite possible for neighborhood change to proceed as an orderly transition from all-white to all-Negro occupancy without the occurrence of certain processes (e.g., "flight" of whites, rapid collapse of neighborhood institutions) often considered endemic to the succession process. Perhaps at the same time, the existence of such a community can alert those who value racially integrated neighborhoods to some important strategy clues.

TABLE 1

A COMPARISON OF SOUTH SHORE AND ROGERS PARK*

Variable	Rogers Park	South Shore
Population characteristics:		
Foreign stock (%)	48.4	42.2
Under 18 years of age (%)	21.0	21.4
Over 65 years of age (%)	14.2	15.7
Years of median schooling	12.2	12.2
Males in white-collar occupations (%)	66.2	62.6
Median family income	$ 7,465	$ 7,888
Persons 5 years and older living in different house in 1955 (%)	61.1	54.6
Four years of college or more (%)	12.8	13.3
Housing characteristics:		
Population per household	2.41	2.52
Owner-occupied (%)	11.3	21.1
Substandard (%)	2.6	2.0
Median value of units	$20,300	$19,500
Median rent	$110.00	$112.00
Median number of rooms per unit	3.9	4.2
Built 1950 or later	6.3	6.2
Year when building activity declined after housing stock "matured"	1930	1935
Location of community	Directly on Lake Michigan, 6400–7600 North	Directly on Lake Michigan, 6700–8300 South

* SOURCE.—Kitagawa and Taeuber 1963.

The community under study is South Shore—an area of approximately 75,000 persons, and traditionally the home of middle-class and upper-middle-class Chicago whites. Its housing stock was, in 1960, basically sound and of mixed varieties with 75 percent of residents living in apartments. In terms of the class and ethnicity of its residents, as well as in terms of almost all other major characteristics (table 1), South Shore was typical of those communities which Fishbein (1962) and others (Taeuber and Taeuber 1965) have described as most likely to experience racial change. Like an increasing number of citizens in transition areas, South Shore residents had formed a strong community organization (the South Shore Commission, one of the country's largest) devoted to the goal of achieving biracial stability.

Despite the existence of such an effort, there would seem to be little doubt that South Shore's racial composition was changing rather rapidly compared with other Chicago communities also experiencing racial change in the 1960s. Data based on birth and death records, as well as changes in public school composition, would indicate that a larger number of Negroes moved into South Shore between 1960 and 1966 than into almost any other Chicago community (Hospital Planning Council for Metropolitan Chicago 1966).[2] The Negro population of the area is estimated to have increased from 152 to 18,407 during the six-year interval.

Similarly, racial head counts taken in South Shore schools reveal a classic succession pattern with school after school changing from all-white to all-Negro status as the "racial line" moved across the community.[3] By 1966, the community's population was approximately 25 percent Negro, with most Negroes living in those portions of the community (the northern and western sections) nearest to long-established Negro residential areas outside of South Shore.

GENERAL STRATEGY

No American community is completely stable; one of every five Americans changes residence each year. The precise question to be answered is not "is South Shore stable?" but "is it stable relative to other communities which are similar in every way except that they are not experiencing racial change?" The decision was made to compare South Shore in terms of rates of property turnover with the most similar nonracially changing all-white community.

The community selected for comparative purposes was Rogers Park, another of Chicago's seventy-five "Community Areas,"[4] and one which bears a striking similarity to South Shore. Both areas are on the lake shore and almost equidistant from the Loop; South Shore begins sixty-seven blocks south of the city center, and Rogers Park begins sixty-four blocks north. The far-north location of Rogers Park, however, places it at a distance from the edge of the city's Negro residential area; in this sense, it was one of the least "threatened" of all metropolitan communities. There have been no publicized "pressures" to integrate the area (although a few

[2] See also the article on racial migration in the *Chicago Daily News*, May 11, 1967. Detailed descriptions of this report and other relevant data are contained elsewhere (Molotch 1968).

[3] Racial composition of all South Shore schools is contained in the following publications for the school year indicated: 1963 data, *Chicago Sun Times*, October 24, 1963; 1964, 1965 data, *Southeast Economist*, October 17, 1965; 1966 data, *Southeast Economist*, October 23, 1966. The changing composition of South Shore's schools is treated in detail elsewhere (Molotch 1968).

[4] These areas were originally demarcated by Burgess and Newcomb (1933) and have been used extensively for purposes of research and dispensing social services over the years. Boundaries and 1960 census data summaries for all seventy-five community areas have been compiled by Kitagawa and Taeuber (1963).

Negro families are said to be in residence); real estate men who were interviewed in the area reported few cases of racial confrontations in their offices, and all who were probed on the subject regarded the area as "stable" and "firm."[5] Despite the existence of aging buildings and some scattered decay (also shared by other older areas such as South Shore), a recent descriptive analysis of Rogers Park by a Chicago newspaper could accurately bear the headline: "Rogers Park: A Community with Few Problems."[6]

The resemblance between the two areas was, apart from the racial variable, indeed very strong—in income, education, and ethnicity of population; in condition, age, and type of housing stock; and, as observed by the writer, in visual appearances which are projected to the casual visitor. Table 1 presents a comparison of the two communities along seventeen variables considered as possibly relevant to residential mobility rates.

SOURCE OF DATA

Because of certain difficulties arising from the manner in which records are maintained by the Office of the Cook County Recorder of Deeds, an alternative source of property transfer data was used: the listings of property transactions in *Realty and Building* (hereafter cited as *R & B*), the trade journal of the Chicago real estate industry.[7]

Since the editors of *R & B* reprint only a portion of the Recorders' records and ignore others, such as instances where complicated land assemblages take place or where property lines are revised, it was necessary to test for possible bias in the reprinted records. A geographical breakdown of total transfers was made for the listing in *R & B* and compared with a similar breakdown included in the annual report of the Cook County Recorder of Deeds (Office of the Cook County Recorder of Deeds 1967). Because it is the only breakdown made in the annual report, the comparison consisted of numbers of transfers within the city as opposed to the number within Cook County suburbs. The geographical divisions utilized in *R & B* permitted the creation of a similar comparison of city versus suburbs. The proportions derived from two different information sources were nearly identical (0.40 vs. 0.42), thus providing some evidence that the data source is unbiased. This is, of course, a very imperfect test, but the best which available data permit. It should be noted, in addition, that the numbers of transfers for any given area are understated in *R & B* records (and thus in the tables which follow) but are presumed to be equally understated among all areas.

[5] Interviews with real estate men in South Shore, Rogers Park, and other areas were carried out as part of a larger study (Molotch 1968; Smolensky, Becker, and Molotch 1968).

[6] *Chicago Daily News*, April 6, 1967, p. 48. As part of the same series of articles describing various Chicago communities, the installment on South Shore was headlined: "South Shore: Can It Keep the Racial Balance" (*Chicago Daily News*, March 23, 1967, p. 64).

[7] *Realty and Building* (Chicago), vol. 156,

PROCEDURES FOLLOWED

All property transfers reprinted in *R & B* for the period July–Deceml 1966 were totaled for Rogers Park and South Shore.[8] It should be no that, during the period selected for study, South Shore had a racial co position (about 25 percent Negro) which most writers on the subject co sider being past the "tipping point" which is alleged to precede wh flight (Weaver 1956; Abrams 1955, p. 311). Property type (house, apa ment building, or store) was determined by reference to Sanborn Ma for the relevant city area.

RESULTS: PROPERTY TRANSFER RATES

For each type of property existing in the two areas, the number transferr to new owners was divided by the total number of such properties locat in the community to yield a series of property transfer rates for each loca The findings thus generated reveal that, regardless of property type, Sou Shore appears to be either as stable as Rogers Park or *more* stable th Rogers Park. The results are contained in table 2.

INTERPRETING TABLE 2

Two different comparisons of home transfers are derived on the basis two different conceptions of what constitutes the appropriate base figu for total number of "homes" in each area. In the first instance, the tot number of structures having one, two, three, or four units is used; in t second, the total number of owner-occupied dwelling units is used. The two different bases are used because neither is perfect. The problem emerg from the fact that census categories specifying structures having one, tw three, or four units include all such structures, regardless of whether not one or more units within the structure is owner-occupied. Sanbo Maps, on the other hand, label with a "D" (the symbol used to indicate private home) such one-, two-, three-, and four-dwelling unit structur which are *owner-occupied.* Other such structures are labeled as small apa ment buildings on Sanborn Maps. Thus because of this slight noncomp rability of data, a case can be made that either owner-occupied or numb of structures having one to four units is appropriate for present purpos The number of cases involved in the ambiguity is small, however, becau almost all such "home" structures are single-family dwellings. In additio it will be noted that the results are similar regardless of which source base data is used.[9]

[8] The rather complicated sequence of steps necessary to accomplish this task is report elsewhere (Molotch 1968, chap. 8).

[9] Several additional methodological explanations need to be made. All South Shore da refer to the area as defined by the South Shore Commission and most local residen which is a slight departure from the "community area" as defined by the *Local Co munity Fact Book* for Chicago. Computation of base data was thus complicated by t fact that community boundaries sometimes bisected census tracts. The commission

TABLE 2

Property Transfers in Rogers Park and South Shore

Property Type	South Shore			Rogers Park			
	Number of Cases (1)	Total Number of Such Properties in Area (Base) (2)	Transfer Rate Index (3) (1÷2)	Number of Cases (4)	Total Number of Such Properties in Area (Base) (5)	Transfer Rate Index (6) (4÷5)	χ^2 [a] (7)
1-, 2-, 3-, or 4-family structures	105	8,878	1.18%	43	3,083	1.39%	0.842**
1-, 2-, 3-, or 4-family structures (using owner-occupied for base data)	105	8,320	1.26%	43	2,781	1.54%	1.153**
Condominium units	0	Unknown	...	5	Unknown	...	...
Apartment buildings	20	Unknown	...	15	Unknown	...	...
Apartment units (estimated)	282[b]	25,675[c]	1.09%	422[b]	20,393[c]	2.06%	7.851*
Retailing structures	7	Unknown	...	7	Unknown	...	...
Retailing front lots (estimated)	13[d]	545[e]	2.38%	16[d]	496[e]	3.22%	0.67**
Miscellaneous and unclassified (vacant land, warehousing, etc.)	7	Unknown	...	5	Unknown	...	...

[a] Results of significance tests are presented in spite of the fact that certain assumptions, such as independence, are not strictly met. They may serve, nevertheless, as rough analytical guides (see Gold 1969).

[b] Computed on the assumption of three apartments for each 25 ft. of width and 50 ft. of depth multiplied by number of floors in structure.

[c] Rentor-occupied units, U.S. census.

[d] Determined by visual inspection of Sanborn Maps with each 50 ft. of frontage taken to constitute one front lot.

[e] Refers to number of stores, U.S. census.

* Significant at .01 level.

** Not significant.

DISCUSSION

For apartment units, Rogers Park is *less* stable than South Shore, with a transfer rate higher than in the racially changing community. One of the classic explanations for instability in apartment areas experiencing racial change is that such instability is stimulated or at least intensified by "operators" who move into the local market and buy property which they "turn" and "milk dry" by forgoing maintenance (see Bercovici 1924; Cressey 1930; Molotch 1968). As a result, it is said, whites are "forced out." Such was the view held by many white residents of the South Shore area. A similar theme emerged often in interviews with real estate men who utilized the same theory, although often expressed in different terms, to "explain" why neighborhoods "turn" where and when they do. The low rate of apartment building turnover in South Shore relative to Rogers Park would indicate that such a process is not occurring. Thus, to the extent that such tactics are the source of mobility among tenants, this finding can be regarded as evidence of stability in the rental market. Perhaps tenants, like homeowners, are not "fleeing" from South Shore.

Similarly, there was evidence to suggest that such speculation was not occurring in the home market either. The classic notion here is that certain real estate firms induce whites to sell their houses quickly and cheaply so that they can be resold by the real estate man to Negroes at a premium price. In the present case, during the six-month period under investigation, not a single instance was found where a home was sold and then resold in South Shore. Scheitinger (1948), in his study of the racial transition of Chicago's Oakland community in the 1940s, found many instances of such double sales; and, somewhat more recently, Rapkin and Grigsby (1960) found at least some speculation in changing Philadelphia areas. That none was uncovered in South Shore would seem to provide additional evidence of stability in the area.

VARIATION ACROSS CENSUS TRACTS

It is possible to reason that, although the overall rates of transfer are similar in Rogers Park and South Shore, there may be different patterns

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gards South Shore's territory as extending slightly farther to the south and slightly less far to the west than community area *Fact Book* demarcations. Thus the total number of owner-occupied dwellings was computed by use of census *block* data. Base totals for number of structures having one, two, three, or four units were derived by dividing the total number of two-family structures by 2, the number of three- and four-unit structures by 3.2 (an arbitrary figure based upon an estimate of the proportion of three- as opposed to four-family structures in the area), and adding the derived quotients to the total number of single-family structures. Data on number of units within structures are not published by census block; thus, for those South Shore tracts bisected by boundary lines, totals for bisected tracts were multiplied by the proportion of tract area located in South Shore, and resultant products were added to other tract totals. Total numbers of stores (treated as comparable to the number of fifty-foot storefronts) and numbers of apartments were derived from census tract data, with tracts overlapping community boundaries treated in a similar manner.

of turnover within the two communities which would imply that whites were, indeed, fleeing from at least *some parts* of South Shore. More precisely, it could be argued that, in certain tracts (perhaps those recently opened to Negroes), there was a high degree of turnover which was balanced out by an extremely low rate of mobility in other tracts (e.g., all-white areas) where residents "freeze" during a period of racial uncertainty.

The evidence, however, is not consistent with such an alternative explanation. Single-family house transfer rates in South Shore varied from a low of zero (in one small tract with few houses) to a high of 2.6; the analogous extreme figures for Rogers Park were 0.04 and 3.0. The standard deviation across tracts was slightly higher for Rogers Park (9.8) than for South Shore (7.9).

"FOR SALE" SIGN COUNTS

It might be argued that the stability which has been found to characterize South Shore's home-owning population is one of involuntary stability forced upon residents unable to find buyers (or at least "satisfactory" buyers)

TABLE 3

MOBILITY WISH INDEXES FOR SOUTH SHORE AND ROGERS PARK

	South Shore	Rogers Park
Number of signs	141	43
Number of housing units owner-occupied	8,320	2,613*
Mobility Wish Index	1.69%	1.64%

* There are 2,781 owner-occupied housing units in Rogers Park. Because one tract (a "peninsula" constituting the northeast tip of the area) was inadvertently not checked during the sign count, the number of owner-occupied units within that tract was subtracted from the total.

in a market depressed by racial change. To test this proposition, a comparison was made of South Shore and Rogers Park in terms of the proportions of homeowners who *wanted* to sell their homes. In order to gain a measure of this "mobility wish," every front block of both areas was inspected, and the total number of For Sale signs in front of one-, two-, three-, and four-family homes was recorded and divided by the total number of such dwellings in each area to yield a "Mobility Wish Index." The For Sale sign counts were made twice for South Shore and once for Rogers Park. Comparison is made here between "counts" for the two areas taken during the first week of December 1966. (Touring all streets of South Shore required approximately four days, and Rogers Park required three.)

It is clear from the results contained in table 3 that desired mobility is the same in Rogers Park and South Shore. Again, evidence would indicate that South Shore is stable; there are no signs of "flight" by homeowners from this racially changing neighborhood.

Attention must be paid to a possible objection to the use of For Sale signs as an index of a mobility wish. There may be a difference in the degree

to which home sellers utilize such signs in the two areas. It may be, for example, that South Shore's white sellers desist from using such signs for fear of alienating their neighbors—or because they think such signs would endanger community "morale," which they feel an obligation to protect. To be certain that such was not the case, a random sample of real estate firms in South Shore and all real estate firms in Rogers Park (as listed in neighborhood telephone directories) were visited; officials were asked for lists of all homes they had for sale in the two areas. Each home on the lists thus accumulated was visually inspected. The total number of signs in each area was computed and then divided by the number of homes listed for sale in each community. The results, as set forth in table 4, indicate an equal propensity to sell with a For Sale sign in the two areas.

THE EFFECTS OF "RACIAL VIOLENCE" UPON STABILITY

It is often observed by those commenting on racial change processes that, whereas a community can remain somewhat stable for a period of time, racial "incidents" are bound to occur, and it is such incidents which act

TABLE 4

PROPENSITY TO UTILIZE "FOR SALE" SIGNS TO SELL HOMES IN SOUTH SHORE AND ROGERS PARK

	South Shore	Rogers Park
Number of dealers interviewed who had houses for sale.....	9	7
Number of houses on all lists..........................	74	33
Number of signs..	23	11
Number of signs as a percentage of total homes listed for sale.	31%	33%

as a catalyst for the white exodus. Many interviews with community leaders, local citizens, as well as inspection of various documents and newspapers indicated that South Shore was generally free of such "incidents"—at least until a "riot" occurred at the high school serving the community. The fracas was widely and prominently reported by the daily press, radio, and television. The melée was allegedly begun by a group of Negro youths who, during lunch period, shouted in unison the war chant of a notorious youth gang (the Blackstone Rangers) and then engaged in shouting, throwing furniture, breaking windows, etc., until police arrived and restored order. Approximately twelve students were injured. Within the week, an emergency community meeting was held at the high school with an attendance (virtually all white) which flowed beyond the auditorium corridors and into classroom hallways. I was present at the meeting and circulated among the standing groups of worried citizens, engaging them in conversation and picking up bits and pieces of conversation. Particularly at the meeting's close, after hearing pledges from local police and school authorities that their children would be protected from further harm, the consensus

of the audience seemed to be that, in the words of more than one resident, "the whole thing [the security program] is a farce." Resident after resident was heard to remark, "I'm going to put my house up for sale"; "I'm selling; there's nothing else that can be done"; "What else can I do but move?" and "I'm calling a broker."

In light of the manifest attitudes of so many South Shore residents, it is surprising to note that the high school incident seems to have had no immediate effect upon the number of houses in the area placed on the housing market. A count of For Sale signs was made November 1 through November 4, the days immediately following the high school incident. A second count (reported earlier for purposes of comparison with Rogers Park) was made December 2 through December 6—approximately one month later. It is assumed that the first count describes the state of the housing market "before" the incident; it would take several days for a homeowner to contact a real estate firm, sign a contract, and have a sign placed on his property. The second count is assumed to reflect any changes wrought by the incident; a month would seem to be enough time to make the necessary arrangements to place one's home on the market. The results of the two counts were as follows: the November count revealed a total of 150 houses for sale; the count a month later indicated 141 houses for sale. The slight drop in the number of houses for sale would seem inconsistent with the notion that such incidents as the one described above bring with them a swift and dramatic white exodus. At least this did not occur in South Shore.

STABILITY AND TRANSITION IN SOUTH SHORE: A CONCLUSION

In retrospect, it should not seem surprising that a community in which resident whites seem disposed to remain can nevertheless experience complete racial change over a relatively brief period. In the year 1960, just prior to the influx of Negroes into the area, 54.6 percent of South Shore residents were living in a household different from the one they occupied in 1955 (Kitagawa and Taeuber 1963, p. 3). During this period, the mobility of South Shore residents was approximately equal to the analogous figure for the city of Chicago as a whole (53.4 percent). With such rates of mobility, it is thus conceivable that the entire population of a community could replace itself within a period of ten or fifteen years through normal turnover. True, some persons tend to remain in a single place for their entire lives (Jay 1956); it is probably this minority which ends up making a "racial move" from a home which ultimately will be surrounded by a Negro residential area.

But most persons, including those in South Shore, change their residence for very mundane reasons: to begin a new household, to be nearer a job, to own a home of one's own, to secure larger quarters for a growing family, or to gain an environment deemed appropriate to a rising social status (Rossi 1955).

That important life decisions continue to be made on the basis of such

mundane criteria—even in the face of Negro in-migration— should not be surprising. Other investigators have provided evidence that racial change may, indeed, not have some of the dramatic consequences often attributed to it. Rapkin and Grigsby (1960) have found that, in changing Philadelphia communities, white home purchasing continues during transition, although at a declining rate with propinquity to all-Negro blocks. Consistent with the major finding of the present research (i.e., stability during transition), the same authors as well as others (e.g., Schietinger 1951; Laurenti 1960) have discovered that property values tend to remain constant or increase with Negro in-migration.[10] This would be the expected economic consequence of a *stable supply* of housing units in a context of stable or rising demand from a combined Negro-white pool of purchasers. Other studies have demonstrated a willingness on the part of whites to remain in, or even move into, biracial areas as long as certain practical benefits such as space or convenience to work could be achieved. The work of Mayer (1960) and Grier and Grier (1960) indicates the salience of these factors, as opposed to "pro" or "anti" Negro attitudes, as determinates of community racial composition.

It may very well be that some form of anti-Negro "prejudice" prompted some South Shore residents to leave their community (who would not otherwise have done so) and that measures used in the present study were not sufficiently sensitive to tap such mobility. But it does seem that the existence of such motivations is not a significant determinant of South Shore's all-Negro fate. *It is likely that a similar number of persons would have changed their residence no matter what racial conditions existed in the area.* The speed of racial change characteristic of South Shore may seem at first glance to be so high as to indicate that only a flight of white residents could make it possible. But when viewed in the context of the high mobility rate of the general urban population, it becomes perfectly reasonable for such a racial change process to occur within the context of a market characterized by normal turnover. Normal mobility makes neighborhood racial change *possible;* when Negroes constitute the bulk of those who move into the vacancies which result, racial change is made *inevitable.*

IMPLICATIONS FOR RACIAL INTEGRATION

Any conclusions drawn from a study such as this must be tentative; they result from a case study of one changing community at a particular juncture in its racial history. Additional investigations are needed if the implications of the present findings are to be treated with confidence.

But if South Shore is becoming an all-Negro area despite the fact that whites are not "fleeing," the conclusion is suggested that the basis for achieving racial integration in such an area is *not* in convincing whites to remain in a changing neighborhood. It happens that in South Shore the

[10] There have been other studies, however, which indicate that property values may also decline with Negro in-migration (Wheeler 1962; Palmore and Howe 1962). Perhaps these were instances of rapid property turnover during transition.

leaders of the major community organization, perhaps in their wisdom, paid minimal attention to this sort of strategy. Perhaps they were aware that the key must lie in the local real estate market forces which cause the preponderance of the *relatively* few (but *absolutely* many) vacancies which occur through normal mobility processes to be filled by Negro families. Involved, no doubt, are conscious decisions by real estate men which influence this process as well as a reluctance of whites living elsewhere *to move into* a changing neighborhood. Also involved are the relationships of supply and demand which exist within *and between* the Negro and white housing markets. These are concerns beyond the scope of the present effort, which has sought only to indicate that there are important signs that whites living in a rather typical changing urban community are quite willing to remain where they are and do not display behaviors which are an impediment to neighborhood racial integration. They behave in a manner consistent with community stability; it is other factors and other forces which render that resultant stability inadequate as a sufficient cause for neighborhood racial integration.[11]

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[11] A discussion of some of these factors is contained elsewhere (Molotch 1968).

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Marriage Plans and Educational Aspirations[1]

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Data from a national sample of 4,000 high school students indicate that aptitude, socioeconomic background, and marital plans each exert an independent influence on the educational aspirations of both males and females. The direct effect of marriage intentions on educational aspirations is shown to be especially marked for girls. Plans for future research employing a longitudinal design to explore the effects of marriage on educational aspirations and on educational attainment are briefly noted.

The relationship between socioeconomic status, ability, sex, and the educational aspirations of youth have been well documented and consistently verified in sociological and psychological literature (see Sewell 1964; Sewell and Shah 1968*a*, 1968*b*). However, the relationships of other personal and sociodemographic factors with educational aspirations have been studied less and, in general, have been viewed with suspicion if "adequate controls" have not been introduced for SES, IQ, and sex. Indeed, if statistical control for these three variables has not been introduced in a research design, the results and implications of reported relationships between numerous other independent variables and educational aspirations have been generally dismissed as assumed methodological artifacts.

In a recently completed study of predictors of marital outcomes, it was observed that there is a high correlation between the marital plans of young people and their educational aspirations (Bayer 1969). Relatively weaker relationships were observed between marital plans and both socioeconomic status and academic aptitude. These comparative by-product results of the study are thus suggestive of a possible strong independent influence exerted by marital plans on educational aspirations. This paper presents an analysis to explore this hypothesis.

THE DATA

SAMPLE

In 1960 the American Institutes for Research, with support from the Cooperative Research Program of the U.S. Office of Education, initiated Project Talent, a nationwide study of American youth enrolled in grades 9–12.

[1] This paper utilizes data collected by Project TALENT, a cooperative effort of the U.S. Office of Education, the University of Pittsburgh, and the American Institutes for Research. The design and interpretations of the research reported herein, however, are solely the responsibility of the author. I am indebted to Marsha D. Brown and Richard A. Williams for technical assistance and to Alexander W. Astin and John K. Folger for suggested revisions of an earlier draft of this paper.

Approximately 73,000 twelfth-grade students in the stratified random sample of high schools throughout the United States completed the two-day battery of tests and inventories.[2] A random subsample of 2,000 males and 2,000 females with complete information on selected variables was drawn from this national sample. With the exception of the aptitude scores, which are one-fourth to one-third of a standard deviation higher for the subsample than for the complete grade sample, the means and variances of the subsample and the population estimates based on the sample are similar for the remaining variables employed in this paper (table 1).[3]

TABLE 1

MEANS AND STANDARD DEVIATIONS OF VARIABLES EMPLOYED IN THE ANALYSIS, BY SEX: STUDY SUBSAMPLE AND 1960 HIGH SCHOOL-SENIOR POPULATION ESTIMATES

	Study Sample				Population Estimate †			
	Males		Females		Males		Females	
Variables*	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.
Aptitude composite score.	575.4	111.6	559.0	104.5	539.5	126.5	534.0	112 3
Socioeconomic index score..	100.4	9.1	99.9	8.9	100.0	10.0	99.2	9 3
Marital-plans recode......	5.5	1.4	4.4	1.5	5.8	1.5	4.6	1 6
Educational-aspirations recode......	2.6	1 0	2.1	0.9	2.5	1.1	2.1	0.9

* See text for a description of the variables and coding procedures.

† Based on total Project TALENT twelfth-grade sample weighted to adjust for stratified sampling ratios. Data derived from unpublished tabulations and from distributions and statistics reported in John C. Flanagan et al. (1964, pp. 5-25, 5-28, 13-5).

VARIABLES

The aptitude variable is a composite score derived from more than 750 items dealing with arithmetic and mathematics, English usage, vocabulary, reading comprehension, and abstract reasoning in the Project Talent test battery (see Flanagan et al. 1964). Scores are standardized to have a complete age-group population mean of 500 and a standard deviation of 100.

The socioeconomic index is a composite score based on nine items from

[2] A comprehensive discussion of the Project TALENT research design in presented by John C. Flanagan et al. (1962).

[3] It has been shown elsewhere that the rate of complete response to the TALENT test battery is related to aptitude level (Flanagan et al. 1964, p. 5-5). The effect of introducing a restriction of complete data on selected variables in the student records is thus to introduce the reported aptitude bias into the study subsample. However, it is assumed that there is minimal bias in the relationships between the variables employed in this analysis.

the battery. Included are items on father's occupation, father's and mother's education, family income, and the number of family possessions in specified categories (see Shaycoft 1967). The computed socioeconomic composite scores are standardized on the twelfth-grade high school boys, with a mean of 100 and a standard deviation of 10.

The marriage-plans variable is based on the 1960 responses to a question on what age the participant expects to be when he gets married. This item is coded in the following categories: (1) age 17 or under, (2) age 18, (3) age 19, (4) age 20, (5) age 21–22, (6) age 23–24, (7) age 25–26, and (8) age 27 or older.

The criterion variable is a measure of educational aspiration, based on the stated amount of education the participant expected to receive at the time he was enrolled in twelfth grade. Responses to the item are coded as

TABLE 2

ZERO-ORDER CORRELATIONS BETWEEN APTITUDE, SOCIOECONOMIC STATUS, MARITAL PLANS, AND EDUCATIONAL ASPIRATIONS

Variable	Aptitude Score	Socieconomic Index	Marital Plans	Educational Aspirations
Aptitude score	...	.418	.201	.563
Socioeconomic index	.374	...	.151	.435
Marital plans	.241	.164	...	.289
Educational aspirations	.477	.419	.457	...

NOTE.—Correlation coefficients above the diagonal are for males; those below the diagonal are for females.

follows: (1) no post-high school education plans, (2) some post-high school education planned, but less than four years of college, (3) plan to receive a four-year college education only, and (4) plan to complete college and study for an advanced degree.

The means and standard deviations, by sex, for each of these four variables described above are shown in table 1 for the present sample and for the estimated total 1960 grade-12 population.

RESULTS

The gross interrelationships among the four variables are shown in the matrix of zero-order correlation coefficients (table 2). All coefficients are positive and statistically significant for both males and females. For males, SES alone accounts for 19 percent of the variance in educational aspirations, aptitude alone explains 32 percent of the variance, and marital plans alone explain 8 percent of the variance in the criterion. For females, SES alone accounts for 18 percent of the variance in educational aspirations, aptitude alone explains 23 percent of the variance, and marital plans alone explain 21 percent of the variance in the criterion.

The multiple-regression equation of all three predictor (independent) variables on the criterion (dependent) variable yields an R of .63 for the

males and .64 for the females. That is, 39 percent of the variance in educational aspirations of the males and 41 percent of the variance in educational aspirations of the females is accounted for by aptitude, SES, and marriage plans while in high school.

While the results discussed above yield some information on the effect of the predictor variables on educational aspirations, the correlational analyses do not allow the assessment of the *relative* influence of each antecedent variable on the consequent variables. Path analysis does, however, achieve this objective by making explicit the assumptions underlying the analytical model and by elucidating the indirect effects of the independent variables in the model (see Duncan 1966). The path coefficients are partial-regression coefficients in standard form, the β-coefficients, and measure the relative effect of one variable on another while controlling for the other variables in the same system.

The direct effect of SES on educational aspirations is reflected by the path coefficient of .228 for males and .250 for females (fig. 1).[4] The indirect effect—the difference between the zero-order correlation with the dependent variable and the path coefficient—of the socioeconomic variable is almost one-half (47.6 percent) of the total influence of this variable for the males and two-fifths (40.3 percent) for the females. The indirect effect, through marital plans, of SES on educational aspirations is reflected in a coefficient of .01 for males (.081 × .167) and a coefficient of .03 for females (.085 × .343).

The direct effect of ability on educational aspirations is reflected by the path coefficient of .435 for males and .301 for females. The indirect effect of the ability measure on educational aspirations is more than one-fifth (22.7 percent) of the total influence of this variable for the males and more than one-third (36.9 percent) for the females. The indirect effect, through marital plans, of ability on educational aspirations is reflected in a coefficient of .03 for males (.167 × .167) and a coefficient of .07 for females (.210 × .343).

The net *independent* influence of marriage plans on educational aspirations is substantial. For males, the effect of marital plans on educational aspirations, independent of SES and ability, is reflected in the path coefficient of .167. For females, the comparable figure for the effect of marital plans on educational aspirations, independent of the other two predictor variables, is .343. For the males, 42.2 percent ([.289 − .167]/.289) of the contribution of marriage plans in predicting educational aspirations is attributable to the indirect effects of the other antecedent variables rather than to the effects of marriage plans per se. For females, only one-fourth ([.457 − .343]/.457) is a spurious result of the preceding variables.

SUMMARY AND CONCLUSION

In summary, the analysis reported above indicates that aptitude, SES, and marital plans each exert a strong independent influence on the educational aspirations of both male and female high school seniors. The direct effect of

[4] All path coefficients in fig. 1 are more than twice the standard error of the β-coefficients.

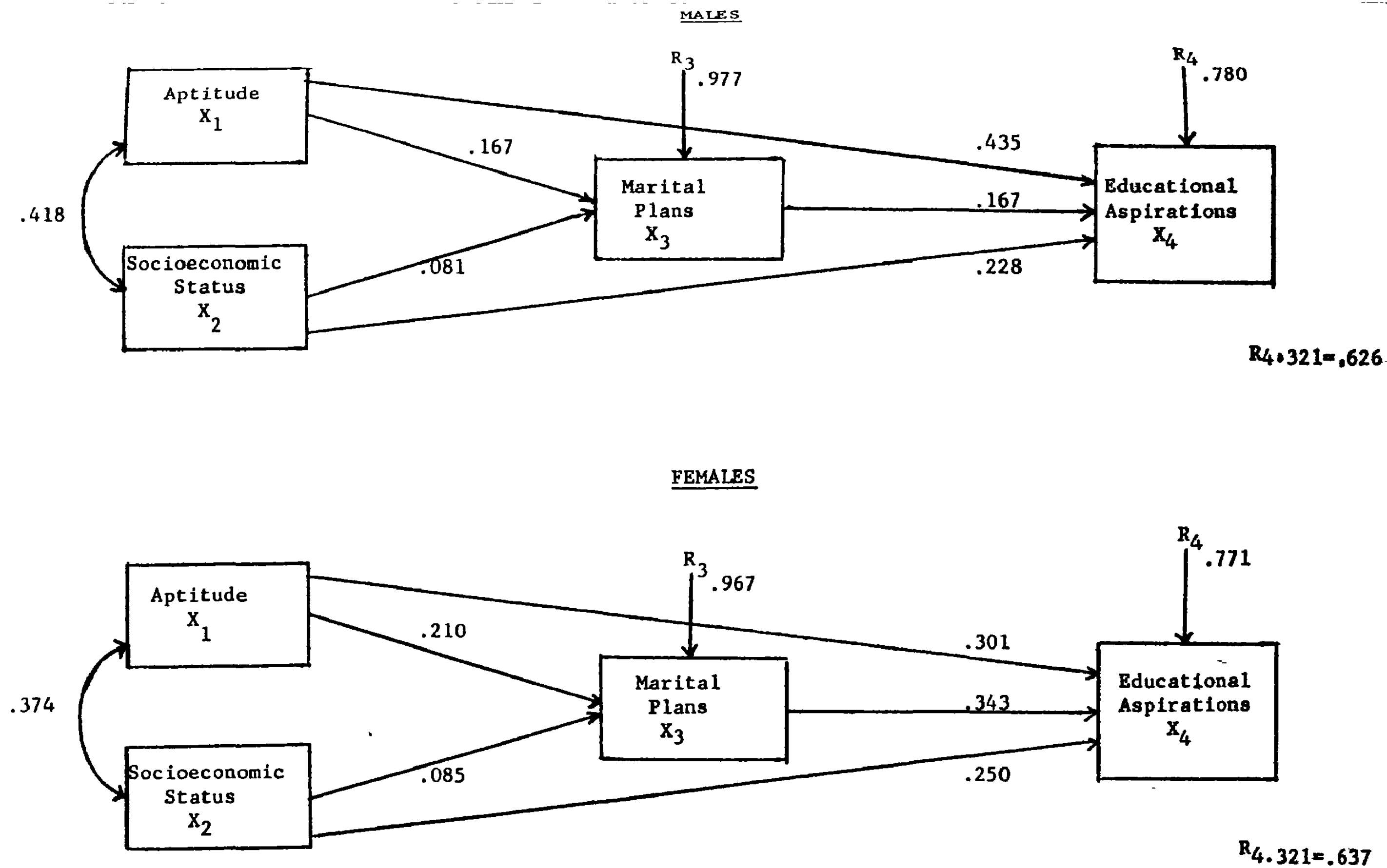


FIG. 1.—Path diagrams relating educational aspirations to aptitude, SES, and marital plans, by sex

marital plans on educational aspirations is especially marked for girls. Nevertheless, the path diagrams show that there are very large residuals (unexplained variance) and indicate that either (1) educational aspirations are largely unpredictable and highly fortuitous, or (2) additional variables need to be incorporated into the prediction system. The second conclusion would appear to be a more gratifying research mandate to most educational researchers.

A longitudinal research program currently under way at the American Council on Education is designed to continue the study of the effects of a large number of student background and environmental factors on both educational aspirations and educational attainment (see Astin et al. 1966).[5] These analyses will explore further the independent effects of both marriage plans and marital outcomes on these educational-criterion measures.

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[5] The use of these longitudinal data to assess the effect of early marital plans on subsequent educational attainment will also rule out the possibility that the direction of the relationship between marital plans and educational aspirations which is assumed in this paper may actually be reversed. That is, the data from the panel study reported in this paper may partially reflect the situation where, for example, a girl with no definite plans for marriage decides (for whatever reasons) that college is not for her and then may subsequently decide that she had better start looking for a husband.

Theory, Deduction, and Rules of Correspondence[1]

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Causal models are strictly untestable with a single indicator for each variable, unless one assumes very slight measurement error. With multiple indicators for each variable, incorporated as an extension of the causal model, estimates of the path coefficients may be derived that are subject to sampling variability but are not distorted in the same manner as estimates based on single indicators. Under certain specified conditions, the coefficients thus derived will be inconsistent, thus providing a clue to the existence of nonrandom measurement error of specific kinds. In this paper, procedures for two-indicator and three-indicator models are explored.

The requirement that scientific theories include both abstract concepts and concrete implications, and that the two be logically connected, has been treated rather casually by sociologists. Traditionally, sociological theorists have focused on abstractions with loose and ill-defined implications about matters of fact. More recently, some sociological formulations have shifted to the opposite extreme, stating only connections between measures, without any attempt to make more abstract claims. Either of these modes of theory construction is costly, sacrificing either the clarity of empirical implications or the integrating potential of abstract concepts. Although the literature of the philosophy of science has provided us with terms for referring to the gap between abstract conceptions and concrete events—*rules of correspondence*, *epistemic correlations*, *operational definitions*, and *indicators of abstract dimensions*—these terms do little more than remind us that the gap is there. They do not provide clear guidelines for bridging the gap and suggest no criteria for determining the adequacy of the more or less arbitrarily devised connections between abstract and empirical levels. Clearly, the empirical testing of abstract theories must remain somewhat loose until some strategies for dealing with this problem are devised. To the degree that rules of correspondence are weak and subject to distorting errors, deductions about matters of fact must be regarded as uncertain and possibly misleading.

This general problem is explored in the present paper, not as a problem in semantics—which is the common way of treating it—but as a special problem in theory construction. The general strategy to be employed consists of including the rules of correspondence as an auxiliary part of the theory. The auxiliary theory will thus consist of statements connecting ab-

[1] Revised version of paper presented at the meeting of the American Sociological Association, Boston, Massachusetts, August 26–29, 1968. I wish to thank Hubert M. Blalock, Jr., Otis Dudley Duncan, Jack P. Gibbs, Arthur S. Goldberger, and Karl F. Schuessler for helpful comments on an earlier version of this paper.

stract dimensions and their empirical indicators, statements which will be treated like other theoretical propositions. The implications that may then be deduced allow, under certain conditions, two different kinds of decisions to be made empirically. First, one may determine whether particular indicators are inadequate for testing the implications of a specific abstract formulation because of artifactual measurement error. Second, if the indicators are not found inadequate, one may determine whether the abstract formulation itself is tenable. Although the second kind of decision—the tenability of the abstract formulation itself—is the crucial decision in the final analysis, some decision on the adequacy of the indicators is a prerequisite.

This attempt to treat the problem of rules of correspondence in a formal way builds quite explicitly on the work of others and owes much to their lead. It represents an extension of their work rather than a major departure from their approach. Blalock (1968), following Northrop, has argued convincingly for the necessity of two languages—a theoretical and an operational language—and has suggested that the connections between the two be expressed in an auxiliary theory. I will follow Blalock in representing the auxiliary theory in the form of an explicit causal model. Siegel and Hodge (1968), building on the work of Blalock, Duncan, and Wright, have utilized causal models representing auxiliary theories to investigate the effects of measurement error on the correlation between selected variables. Their detailed work, along with that of Blalock, sets the tone for the present discussion.

We will begin with a discussion of specific desiderata that auxiliary theories should help to achieve, illustrating the problems encountered with simple models incorporating highly simplified auxiliary theories. We will then move to a discussion of auxiliary theories more nearly adequate to the tasks outlined in the earlier discussion.

We consider first a relatively simple model proposing a one-way causal relation between two abstract variables; it may be summarized in the proposition that a change in X leads to a change in Y, but not the reverse, and may be represented graphically by an arrow from X to Y. An auxiliary theory providing one indicator for each of the abstract variables is added. We assume that the indicators are "reflectors" of the abstract variables, that is, that a change in the abstract variable will lead to a change in its own indicator, and we represent these connections with arrows from abstract variable to indicator.[2] The model representing the basic theoretical proposition and the auxiliary theory is shown in figure 1. Associated with each of the three arrows in this causal diagram is a coefficient representing the regression of one variable on another, assuming all variables to be in the form of standard measures. These coefficients may take any value from −1 to 1. Arrows from unspecified sources are added in the graphic representation of the model to represent variation not accounted for in the model;

[2] In experimental studies the indicators of independent variables may be treated as "producers" rather than "reflectors" of the abstract variables, and the connection would be represented by arrows from indicator to abstract variable. Somewhat different problems are presented by the experimental case, which is not discussed in this paper.

specifically, when the coefficients a, b, and c are less than unity in absolute value, these additional arrows may be assigned values such that all of the variance is "accounted for" either by the model or by unspecified sources. In this model we make the usual assumption for causal models that there are no common sources of error variance, or, referring to the algebraic representation of the model, following Simon (1959), that all error terms are uncorrelated.

Ideally, we would be able to estimate the magnitudes of the three unknown coefficients in the model. In this case, however, we have only one observed correlation, $r_{X'Y'}$, and although the model implies that this correlation is a function of the three unknown coefficients ($r_{X'Y'} = abc$, where a, b, and c are path coefficients as shown in fig. 1), this single equation in three unknowns does not provide unique solutions for the coefficients without further assumptions. Assuming knowledge only of the signs of the epistemic coefficients a and c, which is not an unreasonable assumption, it

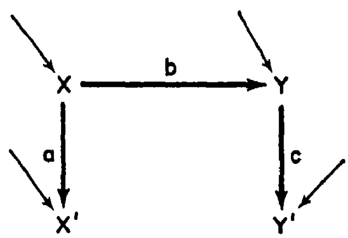


FIG. 1.—Two-variable model with one indicator for each variable

is possible to draw a conclusion about only the sign of the coefficient between abstract variables, b, from knowledge of the sign of the observed correlation, $r_{X'Y'}$. But this is a weak deduction at best and would have limited utility in making further deductions if this miniature model were to be incorporated as a unit into a more complex model involving several abstract variables. Our usual procedure in "testing" causal models with only one indicator for each abstract variable is to take the correlation between indicators as the correlation between the corresponding abstract variables. In so doing we are, in effect, assuming that the epistemic coefficients are either 1 or else very high and subject only to minor random errors. If both epistemic coefficients are less than unity—and they should usually be assumed to be so—$r_{X'Y'}$ will be a biased estimate of the coefficient between abstract variables, underestimating that coefficient to the degree that the product of the epistemic coefficients is less than unity. Such bias of typically unknown degree in the estimates of the abstract coefficients seriously hampers efforts to test certain implications of more complex models, although the disadvantage of this conservative bias is not made immediately evident by the very simple model of figure 1.

There is, however, the possibility of another kind of error more pernicious than random errors of measurement. With an auxiliary theory that provides

only one indicator for each abstract variable, this more pernicious error remains unrecognizable. If the two indicators in figure 1 have common sources of error not shown in the model, the observed correlation between indicators may yield a heavily distorted estimate of the coefficient between abstract variables even beyond the distortion that is attributable to random error. This kind of indicator error is represented by the two models in figure 2, which do not exhaust the possibilities. Each of the models in figure 2 represents an alternative to the model of figure 1, alternatives in which the error terms for the figure 1 model would be correlated, contrary to assumption. The pernicious character of this kind of measurement error is that if it is present we may be grossly misled, and, with only one indicator for each abstract variable, its presence cannot be readily recognized. Even if such error is suspected, its influence cannot be disentangled from the influence of the causal connections explicitly represented in the other parts of the model.

The traditional language of measurement error includes no term for this specific kind. The measurement error represented in the models of figure 2

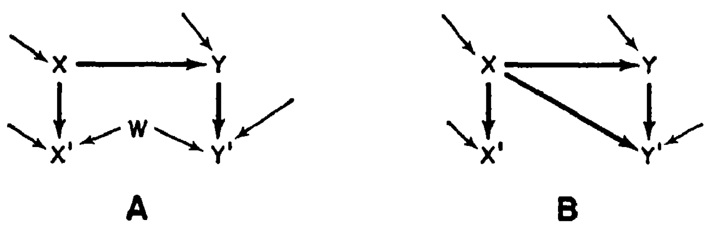


Fig. 2.—Two-variable model with one indicator for each variable and differential bias

is not *constant error* as we ordinarily think of it, that is, an identical quantity added to or subtracted from every measure; such constant error would be uncorrelated with any other variable and hence of no consequence in a causal model. Neither is it *random error*. And it is not *correlated error* in its usual meaning—that is, error magnitudes correlated with the magnitude of the true value. The measurement error in the models of figure 2 is a *differential constant error*, that is, an error that would be constant over repeated measurement for a given case but variable over cases so that this constant error is correlated with another indicator in the model. The general notion of such differential constant error, or *differential bias*, as I shall call it, is quite familiar, although a general term for designating it is not. For example, when arrests are used as an indicator of the incidence of crime in different areas of the city, the abstract correlation between social class and crime, thus measured, is presumably exaggerated because of differential bias. The economic characteristics of areas affect not only the incidence of crime but also the degree of error in arrests as an indicator of the incidence of crime. Figure 2*B* represents this general kind of circumstance in abstract form, that is, the independent variable has an effect on the indicator of the dependent variable both through the dependent variable and directly. A different kind of differential bias is represented in figure 2*A*. For example,

when two abstract variables are measured by responses to verbal statements and both sets of responses are affected by "social desirability" response sets, the correlation between the errors in the two indicators will lead to a distorted estimate of the correlation between the two abstract variables because of this additional common source of variation in the indicators. Differential bias, then, is not a new idea, although this particular way of representing it in the form of unwanted connections between indicators in a causal model may not be familiar. Unlike random error, differential bias does not necessarily lead to an underestimation, on the average, of the correlation between the abstract variables, and its effects cannot be taken into account by utilizing such familiar devices as sampling distributions or a "correction for attenuation," which are based on the assumption of random errors. Ideally, auxiliary theories would be so constructed that differential bias. if present, would be recognizable empirically. This is evidently not the case with such simple auxiliary theories as those represented in figures 1 and 2.

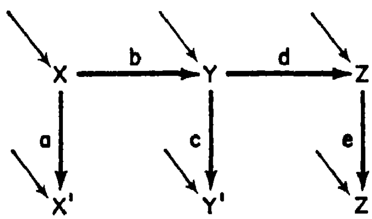


FIG. 3.—Three-variable model with one indicator for each variable

Now we consider a slightly more complex model in which three abstract variables are linked in a causal sequence, with one indicator for each. The model is shown in figure 3.[3] Reference to this model will allow consideration of still another problem, in testing the implications of causal models, that formal auxiliary theories would, ideally, help to resolve.

With epistemic coefficients a, c, and e of 1, this model would imply that $r_{X'Z'}$, $r_{X'Y'}$, and $r_{Y'Z'}$ are nonzero and that $r_{X'Z'} = r_{X'Y'}r_{Y'Z'}$. The empirical tenability of this implication would provide the clue as to whether additional causal connections between abstract variables X and Z should be added to the model. But with epistemic coefficients less than unity in absolute value, this implication will not, in general, be true. In fact, with epistemic coefficients less than unity in absolute value, and with only one indicator for each abstract variable, it is not at all clear how a decision on this implication of the model can be made empirically except by some rather casual rule of thumb. Blalock (1961, pp. 148–55) has shown that random error in the measurement of the intervening variable is especially troublesome in this regard, whereas random error in the measurement of the other two variables is much less critical. But an auxiliary theory, ideally, would go

[3] A precisely parallel problem is encountered if the model is changed by reversing the arrow between X and Y, that is, if the relationship bewteen X and Z is spurious.

further and allow a test of the implications of the abstract model on the abstract plane, uncomplicated by measurement error; the extension to still more complex models would then be relatively straightforward. This is not possible with the auxiliary theory represented in figure 3, even in the absence of any differential bias; the presence of differential bias would complicate the matter still further.

We have now enumerated and illustrated very briefly three desiderata that should ideally be accomplishable by utilizing an auxiliary theory formally representing the connections between abstract variables and their indicators. First, it should be possible to arrive at an estimate for each of the unknown coefficients, including the epistemic coefficients. Second, it should be possible to recognize differential bias, if present, and thereby recognize the inappropriateness of particular indicators in the test of a specific formulation. And third, it should be possible to test the implications of the causal connections incorporated on the abstract plane of the model, without resorting to the grossly oversimplified assumption that the epistemic coefficients are so close to unity as to be of no concern.

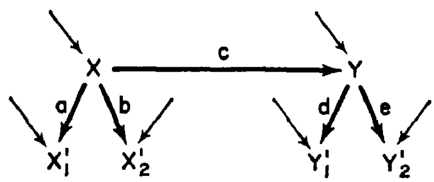


FIG. 4.—Two-variable model with two indicators for each variable

We can achieve these desiderata quite adequately if our auxiliary theory provides at least three indicators for each abstract variable in the model; we achieve them somewhat less completely if our auxiliary theory provides only two indicators for each abstract variable, provided the model on the abstract plane is not unduly complicated. For simplicity, we concentrate here on models that propose only one path between each pair of abstract variables. The general line of reasoning should apply to more complex models, provided they are identifiable (on the identification problem, see Fisher 1966). We consider first auxiliary models that provide only two indicators for each abstract variable and then proceed to consider models providing three indicators.

TWO-INDICATOR MODELS

Figure 4 represents the model identical, on the abstract plane, with the model of figure 1, but now with an auxiliary theory that provides two indicators for each abstract variable. We assume that the correlation between all pairs of indicators is known; hence, instead of one observed correlation as in figure 1, we now have six observed correlations. With the assumption of un-

correlated error terms, each of these six observed correlations may be expressed as a function of the five unknown coefficients as follows:

$$r_{X'_1X'_2} = ab\,, \tag{1}$$

$$r_{Y'_1Y'_2} = de\,, \tag{2}$$

$$r_{X'_1Y'_1} = acd\,, \tag{3}$$

$$r_{X'_1Y'_2} = ace\,, \tag{4}$$

$$r_{X'_2Y'_1} = bcd\,, \tag{5}$$

$$r_{X'_2Y'_2} = bce\,. \tag{6}$$

These six equations allow an empirically testable deduction that serves as a clue to the presence of certain kinds of differential bias. It is evident that the model implies nonzero rs and

$$(r_{X'_1Y'_1})(r_{X'_2Y'_2}) = (r_{X'_1Y'_2})(r_{X'_2Y'_1})\,. \tag{7}$$

This may be shown by substituting the equivalents for these correlations in terms of unknown coefficients, which yields

$$(acd)(bce) = (ace)(bcd)\,, \tag{8}$$

$$abc^2de = abc^2de\,. \tag{9}$$

If differential bias is present, as illustrated in figure 5A, equation (7) will not hold. In figure 5A, we have

$$X'_1Y'_1 = acd\,, \tag{3'}$$

$$r_{X'_1Y'_2} = ace\,, \tag{4'}$$

$$r_{X'_2Y'_1} = bcd + fg\,, \tag{5'}$$

$$r_{X'_2Y'_2} = bce\,, \tag{6'}$$

and

$$r_{X'_1Y'_1}r_{X'_2Y'_2} \neq r_{X'_1Y'_2}r_{X'_2Y'_1}\,, \tag{10}$$

since

$$(acd)(bce) \neq (ace)(bcd + fg)\,. \tag{11}$$

In general, when differential bias provides an additional source of common variance between two and only two indicators, or when different amounts of additional common variance between different pairs of indicators are supplied by differential bias, equation (7) will not hold. However, equation (7) *will* hold for the kind of differential bias illustrated in figure 5B.

In figure 5*B*, we have

$$r_{X'_1Y'_1} = acd + af\,, \tag{3''}$$

$$r_{X'_1Y'_2} = ace\,, \tag{4''}$$

$$r_{X'_2Y'_1} = bcd + bf\,, \tag{5''}$$

$$r_{X'_2Y'_2} = bce\,; \tag{6''}$$

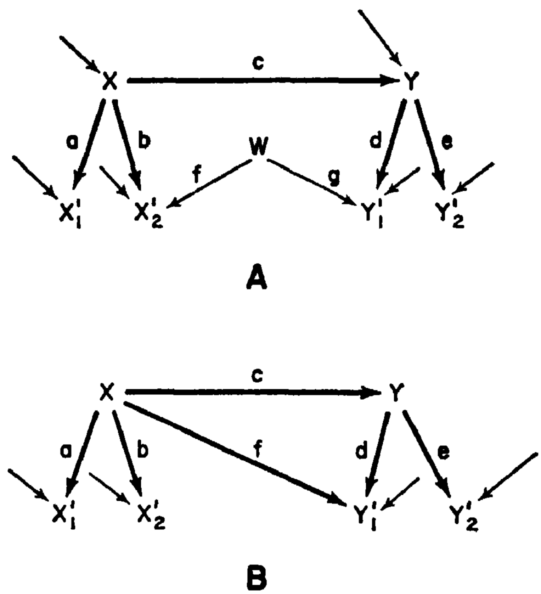


FIG. 5.—Two-variable models with two indicators for each variable and differential bias

and equation (7) holds, that is,

$$(r_{X'_1Y'_1})(r_{X'_2Y'_2}) = (r_{X'_1Y'_2})(r_{X'_2Y'_1})\,,$$

since

$$(acd + af)(bce) = (ace)(bcd + bf)\,,$$

$$abc^2de + abcef = abc^2de + abcef\,.$$

For two-indicator models, equation (7), which we will call the "consistency criterion" for two-indicator models, is thus a necessary, but not a sufficient, condition for the absence of differential bias. If this equation holds exactly, the two estimates for a given path coefficient will be identical; otherwise the two estimates for a given coefficient will be unequal. Failure of the data to satisfy this equation, at least approximately, indicates that, in some respect, the indicators provided in the auxiliary theory are not appropriate for testing the abstract model. With only two indicators for each abstract

riable, no test that is sufficient for ruling out all kinds of differential bias s been devised. But if equation (7) holds, unique estimates for each co- icient in the model may be computed, and the other desiderata previously tlined may be fulfilled in a relatively straightforward fashion. We return figure 4 for a discussion of these other desiderata.

The six equations generated by the model of figure 4 (i.e., equations [1], , [3], [4], [5], and [6]) yield two estimates for each unknown coefficient; se two estimates will be identical if equation 7 is exactly satisfied. Alter- tively, the satisfaction of the consistency criterion uses one of the six uations, leaving five equations in five unknowns which may be solved to ld unique solutions for the unknown coefficients. The solutions[4] are:

$$c^2 = \frac{(r_{X_1'Y_2'})(r_{X_2'Y_1'})}{(r_{X_1'X_2'})(r_{Y_1'Y_2'})} = \frac{(r_{X_1'Y_1'})(r_{X_2'Y_2'})}{(r_{X_1'X_2'})(r_{Y_1'Y_2'})}, \tag{12}$$

$$a^2 = (r_{X_1'X_2'}) \frac{(r_{X_1'Y_2'})}{(r_{X_2'Y_2'})} = (r_{X_1'X_2'}) \frac{(r_{X_1'Y_1'})}{(r_{X_2'Y_1'})}, \tag{13}$$

$$b^2 = (r_{X_1'X_2'}) \frac{(r_{X_2'Y_2'})}{(r_{X_1'Y_2'})} = (r_{X_1'X_2'}) \frac{(r_{X_2'Y_1'})}{(r_{X_1'Y_1'})}, \tag{14}$$

$$d^2 = (r_{Y_1'Y_2'}) \frac{(r_{X_2'Y_1'})}{(r_{X_2'Y_2'})} = (r_{Y_1'Y_2'}) \frac{(r_{X_1'Y_1'})}{(r_{X_1'Y_2'})}, \tag{15}$$

$$e^2 = (r_{Y_1'Y_2'}) \frac{(r_{X_2'Y_2'})}{(r_{X_2'Y_1'})} = (r_{Y_1'Y_2'}) \frac{(r_{X_1'Y_2'})}{(r_{X_1'Y_1'})}. \tag{16}$$

he solutions, stated in terms of squares, leave the signs of the corresponding path efficients formally ambiguous. First, it should be noted that it is empirically possible the squares representing these solutions to be negative—an outcome clearly incon- tent with the implications of the model and therefore requiring a modification in it. suming that all squares representing solutions are positive, the determination of the ns of the coefficients is still ambiguous, since either the positive or the negative root ld be taken. Furthermore, different patterns of signs in the path coefficients may yield identical pattern of signs in the observed correlations. For example, if all indicators inverse indicators of their respective abstract variables, the pattern of signs among observed correlations would be identical to that obtaining if all indicators are direct licators of their respective abstract variables. This ambiguity must be resolved by king a priori assumptions about the signs of the epistemic coefficients, that is, as- nptions as to whether each indicator is a direct or an inverse indicator of its abstract riable. With these assumptions, the sign of the path coefficients connecting abstract riables is no longer ambiguous; that is, the sign of that path is the same as the sign the observed correlation between two direct indicators or two inverse indicators and posite to the sign of the observed correlation between a direct and an inverse indicator. sumptions about the signs of the epistemic coefficients must, of course, be consistent th the observed correlations between indicators of the same abstract variable; for ample, if two indicators of the same abstract variable are negatively correlated with ch other, both cannot be assumed to be direct indicators of that variable and both nnot be assumed to be inverse indicators of that variable.

The potentiality for obtaining empirical estimates for each of the unknown coefficients of the model fulfills another of the desiderata for auxiliary theories outlined above. The possibility of deriving estimates for the epistemic coefficients bears comment, especially since they may be given more importance than they properly deserve. It is not the case that such empirically estimated epistemic coefficients provide a solution to the "semantic problem" frequently alluded to in discussing the problem of devising appropriate indicators. The empirically estimated epistemic coefficients estimate the correlation between each specific indicator and the abstract variable that is assigned a particular role in the model on the abstract plane; they have no bearing whatsoever on the appropriateness, in terms of conventional meanings, of the terms that are attached to the

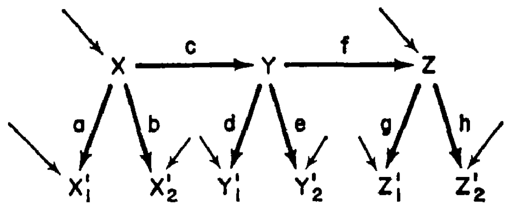


FIG. 6.—Three-variable model with two indicators for each variable

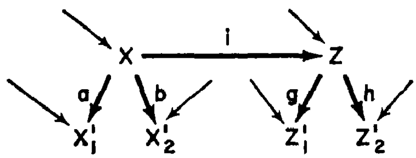


FIG. 7.—The model of fig. 6 with the intervening variable omitted

abstract variables. The epistemic coefficients thus do not provide a solution to the semantic aspects of the problem of indicator validity. They provide only an estimate of the degree to which extraneous factors and random error influence an indicator's service as indicator of an abstract variable that takes its meaning both from the role it is assigned in the abstract model and from the total set of indicators that are provided for it in the auxiliary theory.

We now move to the third of the desiderata for auxiliary theories outlined above. Ideally, we have noted, an auxiliary theory would allow a test of the implications of causal models on the abstract plane, uncomplicated by problems of measurement error. Figure 6 represents an abstract model in which such an implication on the abstract plane emerges, and reference to that figure will facilitate discussion. For easy reference, figure 7 presents the model represented in figure 6 with the intervening variable omitted. It should be clear from the preceding discussion that the consistency criterion must, in this instance, be satisfied in three different ways, that is, with respect to that segment of the model involving X and Y and their

indicators, Y and Z and their indicators, and X and Z and their indicators. If the consistency criterion is not satisfied in any one of these three tests, some of the indicators are subject to differential bias and hence not appropriate to test the abstract model as a whole. If the consistency criterion is satisfied in all three of these tests, it should be evident that we could proceed to derive a solution for each of the three coefficients between abstract variables, c, f, and i. Such solutions are based on equations analogous to equation (12) for c^2. With solutions for the coefficients between abstract variables, it is no longer necessary to work with the directly observed correlations in testing the implications of the model on the abstract plane. The solutions for the coefficients on the abstract plane may be used instead. Thus the implication of the model in figure 6 is that

$$cf = i \,. \tag{17}$$

This, rather than any equation involving the directly observed correlations, provides a test for the abstract model. A high degree of random measurement error in the indicators for the intervening variable no longer has

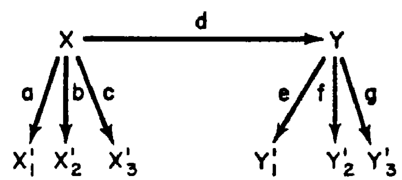


Fig. 8.—Two-variable model with three indicators for each variable

such serious implications as it does when one must work with the directly observed correlations, although such random measurement error will increase the random variation in the solutions for unknown coefficients involving that intervening variable, that is, c and f.

THREE-INDICATOR MODELS

Figure 8 represents the model identical, on the abstract plane, with the model of figure 1, but now with an auxiliary theory that provides three indicators for each abstract variable. Again we assume that the correlation between all pairs of indicators is known; hence we have fifteen observed correlations, three between indicators of X, three between indicators of Y, and nine between indicators of X and Y. There are two general ways to proceed to obtain estimates of the unknown coefficients in this model, and each procedure provides different clues to the presence of differential bias. On the one hand, we may take the indicators for each abstract variable in pairs and proceed exactly as in the two-indicator case with the nine two-indicator models thus formed. On the other hand, we may take advantage of the fact that with three indicators for each abstract variable, the epistemic coefficients may be estimated utilizing only that fragment of the model which constitutes the auxiliary theory for that abstract variable.

Using the solutions thus obtained, we may then proceed to obtain additio al estimates of the coefficient linking the abstract variables. If the model i uncomplicated by any kind of differential bias, the several estimates de rived by the two procedures for each coefficient should all be identical excep for random error; inconsistencies will serve as clues to differential bias, a elaborated below.

We first consider the procedure of forming nine two-indicator model from the single three-indicator model. One such two-indicator model ma be formed from each set of pairs of indicators for each abstract variable that is, X'_1 and X'_2 combined with Y'_1 and Y'_2, X'_1 and X'_3 combined with Y and Y'_3, etc. In a manner analogous to that described above, we obtain consistency-criterion equation for each of the nine two-indicator models each analogous to equation (7) above. These nine consistency-criterion equa tions will have the form

$$(r_{X'_h Y'_i})(r_{X'_j Y'_k}) = (r_{X'_h Y'_k})(r_{X'_j Y'_i}) \, , \qquad (18$$

where h, i, j, and k each assume the values 1, 2, and 3 subject to the restric tion that $h \neq j$ and $i \neq k$.[5]

As before, the failure of any one of these equations to be satisfied indicate the presence of differential bias of the type illustrated in figure 9*A*, and th specific consistency-criterion equations that fail to hold will locate th indicators having a common source of variance not represented in th original model. For figure 9*A*, for example, showing a common source o variance between X'_3 and Y'_1, all consistency-criterion equations involvin both of these indicators would fail to hold. For the model of figure 9*A* al the remaining consistency-criterion equations should be true except fo random measurement error.

Each of the nine two-indicator models which can be formed from a singl three-indicator model will yield two estimates of the abstract coefficient, *d*, for a total of eighteen such estimates. For example, in a manner analogou to that for obtaining equation (12) above, we obtain

$$d^2 = \frac{(r_{X'_1 Y'_2})(r_{X'_2 Y'_1})}{(r_{X'_1 X'_2})(r_{Y'_1 Y'_2})} = \frac{(r_{X'_1 Y'_1})(r_{X'_2 Y'_2})}{(r_{X'_1 X'_2})(r_{Y'_1 Y'_2})} \qquad (19)$$

from the two-indicator model involving X'_1, X'_2, Y'_1, and Y'_2. These two estimates will be identical if the corresponding consistency-criterion equation holds, that is, if $(r_{X'_1 Y'_2})(r_{X'_2 Y'_1}) = (r_{X'_1 Y'_1})(r_{X'_2 Y'_2})$. Eight additional pairs of estimates for d^2 may be analogously obtained. All have the form

$$d^2 = \frac{(r_{X'_h Y'_i})(r_{X'_j Y'_k})}{(r_{X'_h X'_j})(r_{Y'_i Y'_k})} = \frac{(r_{X'_h Y'_k})(r_{X'_j Y'_i})}{(r_{X'_h X'_j})(r_{Y'_i Y'_k})} \, , \qquad (20)$$

[5] Although thirty-six such equations may be formed, only nine are distinct, since the order of the *r*s on a given side of the equality sign is irrelevant. Thus, for example, $(r_{X'_1 Y'_2})$ $(r_{X'_2 Y'_3}) = (r_{X'_1 Y'_3})$ $(r_{X'_2 Y'_2})$ is the same equation as $(r_{X'_2 Y'_3})$ $(r_{X'_1 Y'_2}) =$ $(r_{X'_2 Y'_2})$ $(r_{X'_1 Y'_3})$.

where h, i, j, and k each assume the values 1, 2, and 3 subject to the restriction that $h \neq j$ and $i \neq k$.

Although the satisfaction of the nine consistency-criterion equations implies that each pair of such estimates should be equal, the satisfaction of these consistency-criterion equations is not, in itself, sufficient to imply that equality obtains between pairs. As previously noted in the discussion of two-indicator models, the satisfaction of such consistency-criterion equations

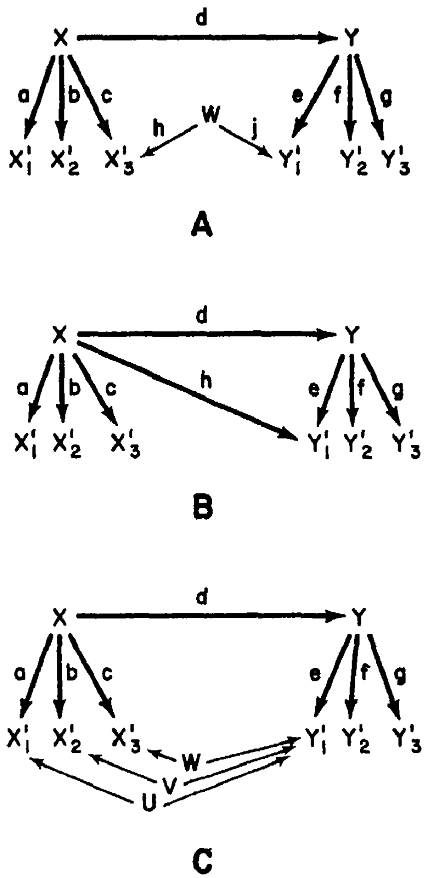


FIG. 9.—Two-variable models with three indicators for each variable and differential bias

is not sufficient to imply the absence of differential bias of the kind illustrated in figure 9*B*, even though differential bias of the kind illustrated in figure 9*A* will lead to the failure of some of these equations to hold. An additional criterion can be specified for three-indicator models which, if satisfied, will be sufficient to imply the absence of the kind of differential bias illustrated in figure 9*B*. This requires that we obtain additional estimates of the abstract coefficient, d, by a different route.

Referring once again to figure 8 and assuming no common sources of variance between the indicators X'_1, X'_2, and X'_3 except their common dependence on the abstract variable, X, we may express the correlations between these three indicators in terms of epistemic coefficients as follows:

$$r_{X'_1X'_2} = ab\,, \tag{21}$$

$$r_{X'_1X'_3} = ac\,, \tag{22}$$

$$r_{X'_2X'_3} = bc\,. \tag{23}$$

By simple algebra we obtain the following estimates for the squares of each of these epistemic coefficients:

$$a^2 = \frac{(r_{X'_1X'_2})(r_{X'_1X'_3})}{r_{X'_2X'_3}}\,, \tag{24}$$

$$b^2 = \frac{(r_{X'_1X'_2})(r_{X'_2X'_3})}{r_{X'_1X'_3}}\,, \tag{25}$$

$$c^2 = \frac{(r_{X'_1X'_3})(r_{X'_2X'_3})}{r_{X'_1X'_2}}\,. \tag{26}$$

In an analogous manner, we obtain the following equations for the correlations between Y indicators:

$$r_{Y'_1Y'_2} = ef\,, \tag{27}$$

$$r_{Y'_1Y'_3} = eg\,, \tag{28}$$

$$r_{Y'_2Y'_3} = fg\,. \tag{29}$$

And the following estimates for the squares of the epistemic coefficients for Y may be obtained as simple algebraic solutions of the three equations above:

$$e^2 = \frac{(r_{Y'_1Y'_2})(r_{Y'_1Y'_3})}{r_{Y'_2Y'_3}}\,, \tag{30}$$

$$f^2 = \frac{(r_{Y'_1Y'_2})(r_{Y'_2Y'_3})}{r_{Y'_1Y'_3}}\,, \tag{31}$$

$$g^2 = \frac{(r_{Y'_1Y'_3})(r_{Y'_2Y'_3})}{r_{Y'_1Y'_2}}\,. \tag{32}$$

We note further that, with the same assumption of uncorrelated error terms, the model of figure 8 also implies

$$r_{X'_1 Y'_1} = ade\,, \tag{33}$$

$$r_{X'_1 Y'_2} = adf\,, \tag{34}$$

$$r_{X'_1 Y'_3} = adg\,, \tag{35}$$

$$r_{X'_2 Y'_1} = bde\,, \tag{36}$$

$$r_{X'_2 Y'_2} = bdf\,, \tag{37}$$

$$r_{X'_2 Y'_3} = bdg\,, \tag{38}$$

$$r_{X'_3 Y'_1} = cde\,, \tag{39}$$

$$r_{X'_3 Y'_2} = cdf\,, \tag{40}$$

$$r_{X'_3 Y'_3} = cdg\,. \tag{41}$$

Squaring both sides of these equations and substituting in them the solutions given above (equations [24], [25], [26], [30], [31], and [32]) for the epistemic coefficients, we obtain nine additional estimates for d^2. All will have the form

$$d^2 = \frac{(r^2_{X'_h Y'_i})(r_{X'_j X'_k})(r_{Y'_m Y'_n})}{(r_{X'_h X'_j})(r_{X'_h X'_k})(r_{Y'_i Y'_m})(r_{Y'_i Y'_n})}\,, \tag{42}$$

where h, i, j, k, m, and n each assume the values 1, 2, and 3, subject to the restriction that $h \neq j \neq k$ and $i \neq m \neq n$.

In the absence of differential bias (i.e., as in the model of fig. 8) all nine estimates of d^2 should be identical, except for random measurement error. The model of figure 9*A*, on the other hand, involves differential bias and will not yield identical estimates. That model yields a set of nine equations identical with equations (33)–(41), except that equation (39) will be

$$r_{X'_3 Y'_1} = cde + hj\,, \tag{39'}$$

and the one estimate of d^2 based on $r_{X'_3 Y'_1}$ will be an overestimate if hj is positive, that is,

$$d^2 < \frac{(r^2_{X'_3 Y'_1})(r_{X'_1 X'_2})(r_{Y'_2 Y'_3})}{(r_{X'_1 X'_3})(r_{X'_2 X'_3})(r_{Y'_1 Y'_2})(r_{Y'_1 Y'_3})}\,. \tag{43}$$

As previously noted, the presence of differential bias of the type represented in figure 9*A* would also have been indicated by the fact that certain of the consistency-criterion equations (having the form of equation [18]) would fail to hold. However, the consistency of the nine estimates for d^2 given by equations having the form of equation (42) will also be sensitive to

the presence of differential bias of the type represented in figure 9*B*. In the model of figure 9*B*

$$r_{X_1'Y_1'} = ade + ah\,, \tag{33'}$$

$$r_{X_2'Y_1'} = bde + bh\,, \tag{36'}$$

and

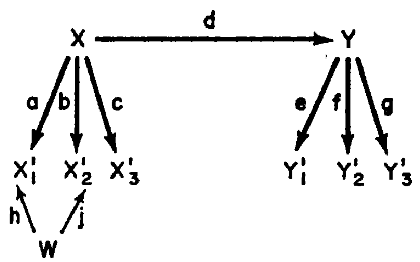
$$r_{X_3'Y_1'} = cde + ch\,. \tag{39''}$$

Estimates of d^2 having the form of equation (42) and based on $r_{X_1'Y_1'}$, $r_{X_2'Y_1'}$, or $r_{X_3'Y_1'}$ will be overestimates if the paths a, b, c, and h are all positive. Thus these three estimates would diverge from the other six in the same direction but not necessarily to the same degree.

We have now defined two types of consistency criteria for three-indicator models. The first consists of a set of nine equations of the form of equation (18) which are analogous to equation (7) for the two-indicator model. Failure of any one of these equations to hold indicates the presence of differential bias of the type illustrated in figure 9*A*. The second type of consistency criteria for three-indicator models consists of a set of nine estimates of d^2 having the form of equation (42). The failure of all of these estimates to be equal to each other indicates the presence of differential bias, either of the type represented in figure 9*A* or in figure 9*B*. More specifically, the divergence of a single estimate in this set of nine from the remaining estimates indicates the presence of differential bias of the type represented in figure 9*A*, that is, extraneous common variance between one indicator of X and one indicator of Y. The divergence (not necessarily equal divergence) of three of these estimates of d^2, each of which is based on a single Y indicator, would indicate the presence of differential bias of the type represented in figure 9*B* if the consistency-criterion equations of the form of equation (18) were all satisfied but would indicate the type of differential bias suggested by figure 9*C* if the consistency-criterion equations involving Y_1' were not satisfied. The three-indicator model thus allows a test for a type of differential bias not possible with the two-indicator model by introducing an additional consistency criterion, namely, that all nine estimates of d^2 given by equations having the form of equation (42) be identical.

We may go one step further with the three-indicator model. We have been concerned above with differential bias, that is, a source of common variance extraneous to the model between at least one indicator of X and at least one indicator of Y. There is another kind of nonrandom measurement error which can also distort the estimates of the abstract coefficient (d in the model of figure 8). This is a source of common variance between the indicators of the same abstract variable other than their common dependence on that abstract variable. This is illustrated in figure 10. In the model of figure 10, X_1' and X_2' have common variance both because of their common dependence on X and because of their common dependence on W. The correlation $r_{X_1'X_2'}$ will therefore be larger than would be the case without this extraneous common variance, assuming, for simplicity, that all co-

fficients are positive. As a consequence, all estimates of d^2 having the term $r_{X_1'X_2'}$ in the numerator would be overestimates of d^2, while all estimates aving that term in the denominator would be underestimates. The three-ıdicator model yields twenty-seven estimates of d^2 (i.e., eighteen estimates aving the form of equation [20] and an additional nine estimates having he form of equation [42]. Twelve of these estimates have $r_{X_1'X_2'}$ in the de-ominators and will be underestimates (assuming a, b, h, and j all positive), hree have that term in the numerators and will be overestimates, while the emaining twelve do not include that term and will not be affected. Clearly, ifferent types of nonrandom measurement error will result in different atterns of divergence among the twenty-seven estimates of d^2 given by the hree-indicator model and thus allow the pattern of inconsistency among stimates to be used as a clue, not only to the presence of differential bias,



IG. 10.—Two-variable model with three indicators for each variable and with an xtraneous source of common variance between two indicators of the same variable.

ut also to the nature of whatever nonrandom measurement error may be perating. Certain complex combinations of different types of nonrandom rror, however, would probably defy an attempt to discern the pattern.

In all the above-named consistency conditions for the three-indicator nodel are satisfied, it will be possible to derive estimates for all the co-fficients and to test the implications of the model on the abstract plane in manner analogous to that represented in equation (17) above.

ISCUSSION

ince the various consistency conditions outlined above are crucial for ob-aining unique estimates of the unobservable coefficients in abstract causal nodels, some brief elaboration of these conditions may be appropriate. The onsistency conditions defined here serve to underscore the points made in everal insightful discussions of the utility of multiple indicators in testing bstract propositions (Curtis and Jackson 1962; Lazarsfeld 1959; Webb et l. 1966, chap. 1). Let it be noted, however, that the consistency criteria ere defined do *not* require that all correlations between different pairs of ndicators be identical; rather, the criteria require that certain products of orrelations shall be identical or that several estimates of a single abstract oefficient shall be consistent. These criteria may be met even though all bserved correlations between X and Y indicators are quite different from

each other. The expectation that all correlations between different pairs of indicators be identical is unnecessarily restrictive; it assumes, in effect, that all epistemic coefficients between a given abstract variable and its indicators are identical, that is, that all indicators of a given variable are equally good indicators, which is contrary to our common thinking about the uneven quality of indicators.

It may be reasonably asked what is meant when we say that the consistency criterion is satisfied. Do we mean that the two sides of equation (7) are exactly identical, that they are approximately identical, or that they should not differ to a degree that is statistically significant at the commonly utilized levels of significance? If all measures are made on the same set of cases, no variation between the two sides of equation (7) should be attributable to variation between samples of cases, and since random measurement error has been explicitly taken into account in the model, it may appear that such error would not contribute to variation between the two sides of equation (7). While it is true that measurement error has been taken into account in one sense, it has not been taken into account in a way that rules out its effect in producing variation between the two sides of equation (7). In effect, equation (7) asserts the equality of two estimates of the same abstract coefficient, *c*. But both estimates are subject to sampling variability to the degree that the epistemic coefficients (*a*, *b*, *d*, and *e*) are less than unity. What we mean, then, when we say that the consistency criterion is satisfied is that the two sides of equation (7) do not differ from each other to a statistically significant degree. This is formally identical to the vanishing of the "tetrad difference" in the classic Spearman factor analysis, and the standard error of the "tetrad difference" is known (Holzinger 1930, p. 6). Satisfying the additional consistency criteria in the three-indicator model presents an additional statistical inference problem, the solution to which does not appear to be found in the factor analysis literature.

If the consistency criterion is satisfied in a particular model or segment of a model, there may be a temptation to interpret it as a validation test for the indicators. The consistency criterion is not a validation of indicators; the absence of differential bias for a given set of indicators in the context of one specific model is no guarantee that differential bias for some of those same indicators will be absent in the context of a different model—or even in another segment of the same complex model. The satisfaction of the consistency criterion is a feature of the model or a segment thereof; it is not a feature of the indicators themselves that can be transferred with them to other models.

The general conclusion to be reached from this discussion is that, although causal models are strictly untestable with a single indicator for each abstract variable unless one assumes very slight measurement error, an auxiliary theory providing multiple indicators for each of the abstract variables will, assuming the consistency criteria are met, allow a test of the implications of the abstract causal model and provide, in addition, estimates of the epistemic coefficients involved in the auxiliary theory itself.

A crucial matter in the whole enterprise, however, is the satisfaction of the consistency criteria as a guard against differential bias, and we may find that certain causal models are simply not testable with certain indicators because differential bias is present.

The general strategy of devising and utilizing auxiliary theories that has been outlined in this paper, with the crucial role it assigns to the intercorrelation between different indicators of a single abstract variable, is probably inappropriate as a guide for dealing with formulations at the highest levels of abstraction. The ties between very highly abstract concepts and the empirical world appear to take a form that is different from that assumed in this discussion. Specifically, highly abstract concepts are frequently designed to encompass a variety of different forms of a given phenomenon that are not necessarily intercorrelated with each other. There is no reason to assume a priori, for example, that all of the many forms of deviant behavior are intercorrelated. Similarly, frustrations are many and varied, and the degree to which one suffers frustration in one guise is no clue to the degree of frustration of another kind. The admission of uncorrelated indicators for a given abstract variable renders the strategy discussed in this paper inapplicable. The problems associated with detailing the connections between such highly abstract concepts, their uncorrelated subforms, and the indicators of each subform—and doing so in a way that allows an unambiguous empirical test of the theory at the highest level of abstraction—will undoubtedly require a more complex and intricate kind of auxiliary theory than the relatively simple type employed in the present discussion. Some progress toward the development of these more complex and intricate auxiliary theories would help provide a needed integration of high levels of abstraction and testable deductions in sociological theory.

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Multiple Indicators and the Causal Approach to Measurement Error[1]

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Since the practical utility of the kind of multiple indicators approach discussed in Costner's paper depends on the ways it can be broadened to include a diversity of causal situations, the purpose of the present paper is to extend the argument in three respects: (1) to show that it holds generally in any recursive system; (2) to note the circumstances under which a single indicator of one or more of the variables can be used; and (3) to point out that the use of multiple indicators can be combined with an instrumental-variables approach that has been discussed in the econometrics literature.

Costner has focused primarily on the very simple case where X causes Y. He has also shown that the procedure works in the case of a simple three-variable chain where $X \rightarrow Y \rightarrow Z$, but the practical value of the procedure obviously depends on its generalizability beyond these very simple situations. We shall see that it also works in the case of the general (linear additive) recursive system.

In a recursive system we can arrange the variables in such a way that the first may be a cause of all the rest, the second the cause of any variable except the first, and so forth. Most commonly, a recursive system would imply one-way causation, although it may also be used to handle reciprocal causation provided that some of the variables can be appropriately lagged[2] Without loss of generality, we may consider the case of one-way causation. In more complex systems, where there is reciprocal causation and where lagged relationships cannot be assumed, ordinary least squares should not be used.

In extending Costner's argument to the more general recursive model it will be convenient to use the theory of path analysis, though I shall retain the notation in which all path coefficients are labeled as a, b, c ... k. I shall confine my remarks to the case where we may assume random measurement errors, since there are too many combinations involving possible nonrandom errors. The notion of "random measurement error" can be conceived in terms of measurement errors produced by numerous minor causes that are not systematically related to each other, but it can also be pinned down more precisely by the assumption that the aggregate effect

[1] I am grateful to George W. Bohrnstedt and O. Dudley Duncan for their comments on an earlier version of this paper and to the National Science Foundation for partial support of this research.

[2] For discussions of recursive equations used in dynamic models involving lagged variables and reciprocal causation, see Herman Wold and Lars Jureen (1953, chaps. 2 and 3) and Robert H. Strotz and Herman Wold (1960, pp. 417–27).

f the residual causes of an indicator produces a residual term which is ıncorrelated with the comparable terms for all other indicators. For example, if we write an equation for the ith indicator of X as $X_i' = k_i X + e_i$, hen we are assuming that the e_i for all indicators of X are uncorrelated with ach other, as well as with the comparable residuals for the indicators of he remaining variables in the system. In terms of path diagrams, this vould mean that there are no arrows directly connecting the indicators o each other.

As long as we are dealing with random measurement errors, each of the ath coefficients (e.g., a, b, d, and e in Costner's figure 4) linking an unneasured variable to one of its indicators will be a correlation coefficient, ut this will not in general be true in the case of the coefficients connecting he various unmeasured variables. While the reader should be able to follow he basic argument without a detailed knowledge of path analysis, I shall ıssume that some of the basic principles are reasonably well understood.[3]

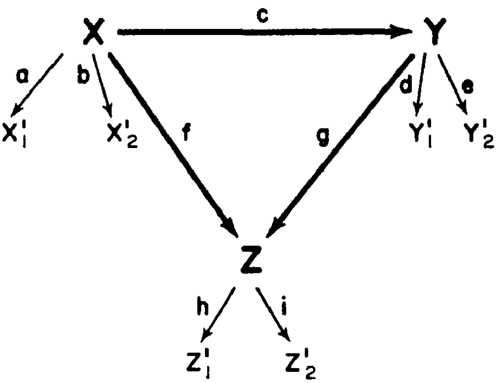


FIG. 1

The feature of path analysis that I shall use throughout this paper is hat one may write a total correlation between any two variables as a simple unction of the path coefficients that connect these variables. Simple ılgorithms for tracing paths may be used in these models without risk of eing misled, though in general it is preferable to write out each relationhip in terms of a set of simultaneous equations to be solved for the path oefficients.[4] The algorithm we shall use is that in tracing the paths conıecting two variables it is permissible to move forward (in the direction of he arrow) or backward, or backward and then forward, but not to move orward and then backward. Examples of the use of this algorithm will e introduced as we proceed.

Let us first consider the three-variable model represented in figure 1. For simplicity, we shall confine our attention to situations where there are

[3] For discussions of path analysis applied to sociology see O. Dudley Duncan (1966); Raymond Boudon (1968, chap. 6); and Kenneth C. Land (1969, chap. 1).

[4] For an explanation of this procedure, see Boudon (1968, chap. 6).

exactly two indicators of each variable since additional indicators will merely provide additional test equations. It is an important feature of recursive systems that any variable that is clearly dependent on two (or more) variables may be ignored in studying the relationship between these variables. Therefore Z may be ignored in studying the relationship between X and Y, and thus the situation involving these two variables is exactly the same (including notation) as in Costner's figure 4. We can therefore confine our attention to the relationships between X and Z and between Y and Z.

Looking first at the relationship between X and Z, we may write the correlation between X_1' and Z_1' as the sum of two separate paths, the first being afh and the second being the indirect path through Y, namely $acgh$. Since a and h (the two measurement-error paths) are common to both of these longer paths we may factor them out, obtaining the expression $ah(f + cg)$. If we do the same for the other combinations of X_i' and Z_i' we get the following results:

$$r_{X_1'X_2'} = ab \qquad r_{X_1'Z_2'} = ai(f + cg)$$

$$r_{Z_1'Z_2'} = hi \qquad r_{X_2'Z_1'} = bh(f + cg)$$

$$r_{X_1'Z_1'} = ah(f + cg) \qquad r_{X_2'Z_2'} = bi(f + cg) .$$

The compound path represented by $f + cg$ appears in each of the pairings involving an X_i and Z_i and can be shown by the method of path analysis to equal r_{XZ} which, although not directly given, can be estimated in a straightforward manner. We form the products

$$r_{X_1'Z_1'}r_{X_2'Z_2'} \quad \text{and} \quad r_{X_1'Z_2'}r_{X_2'Z_1'}$$

and note that they should both equal $abhi(f + cg)^2 = abhir^2_{XZ}$. This predicted relationship again provides a test of the random error assumption, and we may estimate r^2_{XZ} by dividing either of these products (or their average) by

$$r_{X_1'X_2'}r_{Z_1'Z_2'} = abhi .$$

Turning to the relationship between Y and Z we see that a similar result holds. If we correlate Y_1' with Z_1' the result can be expressed as the sum of the two paths dgh and $dcfh$, the latter indirect path involving our tracing backward from Y_1' to Y to X and then forward to Z and Z_1'. This compound path can also be factored into $dh(g + cf)$ and similarly for the remaining combinations. We thus get the following:

$$r_{Y_1'Y_2'} = de \qquad r_{Y_1'Z_2'} = di(g + cf) = dir_{YZ}$$

$$r_{Z_1'Z_2'} = hi \qquad r_{Y_2'Z_1'} = eh(g + cf) = ehr_{YZ}$$

$$r_{Y_1'Z_1'} = dh(g + cf) = dhr_{YZ} \qquad r_{Y_2'Z_2'} = ei(g + cf) = eir_{YZ} .$$

We see that we can again obtain both a test for randomness of the measurement error and an estimate of r^2_{YZ}. All of the various measurement error paths can likewise be estimated.

The extension to additional variables is straightforward, as can be illustrated with the four-variable model of figure 2. Since W is dependent on each of the other variables, we may ignore it in estimating all of the paths involving X, Y, and Z. We then focus on the relationships of each of these variables with W. We can see how the procedure works by confining our attention to X and W, since the pairings of Y and Z with W involve similar processes of tracing paths. There are four paths connecting X'_1 and W'_1, one

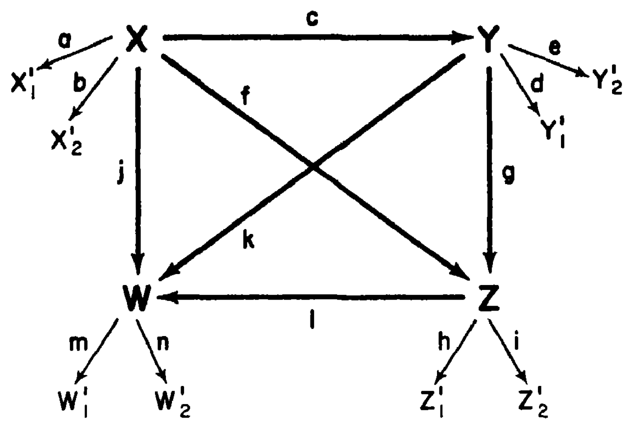


Fig. 2

being via the direct link between X and W, two being through a single intervening variable, and the last involving the three-step path from X to Y, from Y to Z, and from Z to W. Thus

$$r_{X'_1W'_1} = am(j + ck + fl + cgl) = amr_{XW}$$

and similarly

$$r_{X'_1W'_2} = anr_{XW}$$

$$r_{X'_2W'_1} = bmr_{XW}$$

$$r_{X'_2W'_2} = bnr_{XW} ,$$

and therefore

$$r_{X'_1W'_1}r_{X'_2W'_2} = r_{X'_1W'_2}r_{X'_2W'_1} = abmnr^2_{XW} .$$

This procedure can obviously be extended to any number of recursively related variables.

THE USE OF SINGLE MEASURES

Every variable in the models we have thus far considered has been measured by at least two indicators. Are there any conditions under which a single measure may be used to represent one (or more) of the variables? We shall see that in very special circumstances a single estimator may be used, provided one is willing to make rather strong a priori assumptions about the model. Let us consider the model of figure 3 in which the intervening variable Y has been measured by the single indicator Y'_1. The remaining paths have been designated as in figure 1, with the dashed arrow between X and Z indicating that we shall want to consider the special case where $f = 0$, that is, where there is no direct link between X and Z.

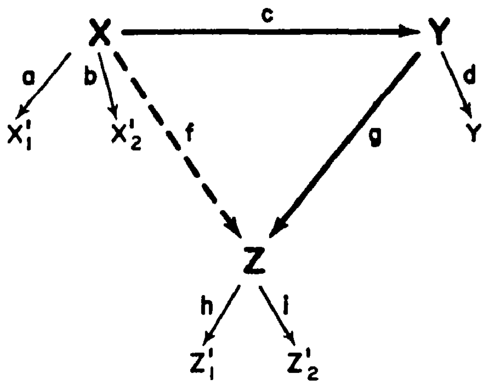


FIG. 3

Since Y'_2 and e have been removed from the model of figure 1, we are more restricted in the relationships we can use. However, in considering the relationship between X and Y we have

$$r_{X'_1Y'_1}r_{X'_2Y'_1} = r_{X'_1X'_2}(cd)^2$$

and therefore

$$(cd)^2 = \frac{r_{X'_1Y'_1}r_{X'_2Y'_1}}{r_{X'_1X'_2}}.$$

From this relationship alone we cannot disentangle c and d, the total path connecting X to Y'_1. But we may combine this result with a similar one obtained in relating Y'_1 to the two indicators of Z. We have

$$r_{Y'_1Z'_1}r_{Y'_1Z'_2} = hi(dg)^2 = r_{Z'_1Z'_2}(dg)^2$$

and therefore

$$(dg)^2 = \frac{r_{Y'_1Z'_1}r_{Y'_1Z'_2}}{r_{Z'_1Z'_2}}.$$

We may now eliminate d, the coefficient for the measurement error in Y, by dividing one of these expressions by the other. We thus obtain an expression for the *ratio* of c to g as follows:

$$(c/g)^2 = \frac{r_{X_1'Y_1'}r_{X_2'Y_1'}r_{Z_1'Z_2'}}{r_{X_1'X_2'}r_{Y_1'Z_1'}r_{Y_1'Z_2'}}.$$

Next consider the paths between X and Z as represented by the compound expression $f + cg$. We see that if there were no direct link between X and Z, so that $f = 0$, we would be in a position to obtain an expression for the *product* cg, which together with the above expression for their ratio would make it possible to solve for either of them separately. If in fact $f = 0$, it would be possible to treat Y as a completely unmeasured intervening variable, with the result that

$$(cg)^2 = \frac{r_{X_1'Z_1'}r_{X_2'Z_2'}}{r_{X_1'X_2'}r_{Z_1'Z_2'}}.$$

This expression can be obtained by merely replacing Z for Y in the model of Costner's figure 4. Had the direct link between X and Z not been zero, it would have been necessary to use the *compound* path $f + cg$ instead of the simple product cg. This would have meant that the presence of f in the expression would have made it impossible to solve for either c or g. With f set equal to zero, however, we may take the product of the (squared) ratio of c to g and that of their (squared) product, obtaining the following result:

$$c^4 = (c/g)^2(cg)^2 = \frac{r_{X_1'Y_1'}r_{X_2'Y_1'}r_{X_1'Z_1'}r_{X_2'Z_2'}}{r^2_{X_1'X_2'}r_{Y_1'Z_1'}r_{Y_1'Z_2'}}$$

and similarly

$$g^4 = \frac{(cg)^2}{(c/g)^2} = \frac{r_{Y_1'Z_1'}r_{Y_1'Z_2'}r_{X_1'Z_1'}r_{X_2'Z_2'}}{r^2_{Z_1'Z_2'}r_{X_1'Y_1'}r_{X_2'Y_1'}}.$$

These results are of course highly complex and very much subject to the vagaries of sampling error. Furthermore, we have had to make the assumption that $f = 0$. This amounts to assuming that Y is the *only* intervening link between X and Z. Since we are allowing for the possibility of measurement error in Y, this particular assumption cannot be tested by the simple device of computing $r_{XZ \cdot Y}$. With random measurement error in Y, this partial cannot be expected to vanish, and we will not be in a position to decide the degree to which the nonvanishing partial was due to measurement error or to the existence of f. Therefore we have to rely completely on the a priori assumption that $f = 0$.

It can similarly be shown that if we had two measures for both X and Y but a single measure for Z, it would *not* have been possible to separate the component paths by any such simplifying assumptions. In particular, the

paths g and h would always be found together as a product, so that the device of multiplying a product by a ratio could not be used. The same holds if X had been measured by a single indicator, with Y and Z having two measures each. It therefore appears as though the only relatively simple kind of model for which a single indicator may be used is one in which the single indicator is linked with an intervening variable in a simple causal chain of the form $X \rightarrow Y \rightarrow Z$. There may possibly be other kinds of situations where a single indicator may be used, but I have been unable to determine what these are.

THE INSTRUMENTAL-VARIABLES APPROACH

Costner has noted that this kind of multiple-indicator approach presupposes a relatively simple auxiliary theory in which all indicators are taken as effects of the unmeasured variables. If, in fact, there are a large number of unknown factors affecting the intercorrelations among the indicators, then it will be difficult to know how to proceed. In addition, it may not be possible to collect data in such a way that there are multiple indicators for *all* of the variables of theoretical interest. As we have just seen, it appears to be true that solutions can be found only in the case of very simple kinds of models (e.g., simple chains) in such instances. It would therefore appear as though the procedure has major limitations in many practical situations of interest to sociologists.

It would seem possible, however, to combine this kind of multiple-indicators approach with other statistical procedures which utilize somewhat different principles, but which also require the explicit formulation of causal models. One such approach that has been discussed in the econometrics literature involves what are called "instrumental variables."[5] Although this approach will be discussed in more detail elsewhere, I can at least indicate the basic ideas which are quite simple. Let us suppose that we are assuming that X causes Y, that X has been measured with random error, and that Y is either perfectly measured or has been measured with random error. If we can now find one or more instrumental variables Z_i which are assumed to be causes of X but which do not appear in the equation for Y (though they will of course be *indirect* causes of Y through X), then we may form a number of instrumental-variable estimators b^*_{YX} by taking ratios of the *covariances* of Y and X with the Z_i.

For example, suppose X is educational discrimination, which we are assuming to be a direct cause of educational inequalities Y. We might have only a single imperfect indicator X' of discrimination. But if we can find a variable Z, say minority percentage, that we are willing to assume affects X but not Y (except through X), we can then write down the pair of equations

$$Y = \alpha_1 + \beta_1 X + \epsilon_Y$$

$$X = \alpha_2 + \beta_2 Z + \epsilon_X$$

[5] For discussions of this approach see Carl Christ (1966, pp. 404–10); Arthur S. Goldberger (1964, pp. 284–87 and 331–33;) and J. Johnston (1963, pp. 165–66).

where it is necessary to assume that Z does *not* appear in the equation for Y. If we used the ordinary least-squares estimator $b_{YX'}$, replacing X by its measured value X', we would obtain a biased estimate of β_1. But we can form the instrumental-variable estimate b^*_{YX} by taking a ratio of the covariance of Y and Z to the covariance of X' and Z:

$$b^*_{YX} = \frac{\Sigma yz}{\Sigma x'z}$$

where the lower case letters refer to deviations around the respective means. It turns out that since covariances are not systematically affected by random measurement errors, the instrumental-variable estimate is a *consistent* estimator of β_1. This means that it has a bias that approaches zero as sample size increases.

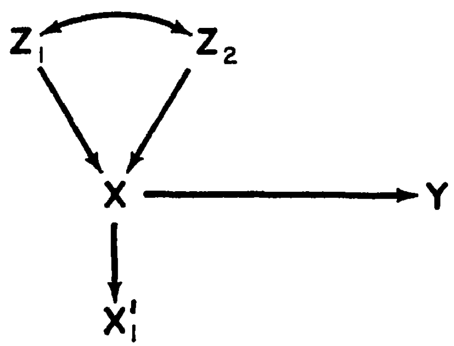


FIG. 4

In the model of figure 4, in which Z_1 and Z_2 both affect X, we would have

$$b^{*(1)}_{YX} = \frac{\Sigma yz_1}{\Sigma x'_1z_1} \quad \text{and} \quad b^{*(2)}_{YX} = \frac{\Sigma yz_2}{\Sigma x'_1z_2}$$

where X'_1 again refers to the first measured value of X. Had there been an additional measure of X, namely X'_2, also assumed to involve only random measurement error, then we could have obtained two further estimates. If the assumptions of the model were in fact correct, these various instrumental-variable estimators would all be approximately equal, subject of course to sampling error.[6] Furthermore, the estimators produced by the instrumental-variable method should be approximately equal to those obtained using the multiple-indicator approach. Whenever the various estimators yield widely different results it should then be possible to postulate alternative models to account for these differences.

The instrumental-variable approach can also be easily generalized to the

[6] The instrumental-variable approach also works if there are random measurement errors in the Z_i but is generally more sensitive to specification errors (i.e., errors in the equations) than is ordinary least squares.

multivariate case, and has in fact has been used principally as a technique for estimating parameters in simultaneous-equation systems involving reciprocal causation.[7] The possibility of combining this approach with that of multiple indicators opens up such a wide variety of models that it will probably be difficult to state very many general principles that can be routinely applied to specific situations. Once the basic ideas of each approach have become generally familiar, however, it should become possible to apply them in various combinations to a wide variety of causal models.[8] In attempting to do so, sociologists will undoubtedly become sensitized to the implications of measurement errors for making causal inferences. At the very least, this should increase our motivation to improve measurement at the data *collection* stage of the research process, so that simplications concerning the nature and extent of measurement error may become increasingly realistic.

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[7] The general formula for the matrix $\mathbf{B}^*$ of instrumental-variables estimators is $\mathbf{B}^* = (\mathbf{Z}'\mathbf{X})^{-1}\mathbf{Z}'\mathbf{Y}$, which may be compared with the matrix equation for $\mathbf{B}$, the matrix representing the least-squares regression estimators. This latter formula is $\mathbf{B} = (\mathbf{X}'\mathbf{X})^{-1}\mathbf{X}'\mathbf{Y}$. It can be seen that these matrix formulas differ only in that the matrix $\mathbf{Z}'$ replaces the matrix $\mathbf{X}'$ in the least-squares formula.

p A third approach, which seems to be basically similar to the multiple indicator aproach and which involves assessing measurement error from observations at three or more points in time, has recently been introduced by Heise (1969).

COSTNER COMMENTS ON BLALOCK

I am grateful to Professor Blalock for showing that the argument of my paper holds in recursive systems generally and therefore that it is not limited to the illustrative causal models that I have discussed. The primary focus of my paper is on causal models that are overidentified so that the assumptions of the model may be tested by the consistency of the estimates derived. It is reassuring, however, to find that the procedure for minimizing the disturbances of measurement error in this restricted class of models is more broadly applicable.

The alternative procedures that Blalock suggests for resolving measurement error problems will undoubtedly prove useful in working on many problems. It should, however, be noted that solutions utilizing single indicators for one or more variables in the model require the a priori assumption of what is often problematic, that is, the assumption that the causal structure is a simple chain as illustrated by the assumption that $f = 0$ in Blalock's figure 3. With single indicators for some variables, there is no consistency-of-estimate test for this assumption. The instrumental variables approach is subject to the same kind of limitation; that is, it is necessary to assume a priori that the coefficient for the direct path from the instrumental variables to the dependent variable is zero, and it is often assertions of this type that need to be tested rather than assumed. In general, overidentified models—that is, those which yield more than one estimate for the same path coefficient—permit a test of the model; models which lead to inconsistent estimates are untenable. On the other hand, exactly identified models—that is, those which yield exactly one estimate for each path coefficient—permit the estimation of numerical coefficients but provide no test of the model. Knowledge of the numerical values of the coefficients may be useful in estimating quantitatively the consequences of a given change in a complex system, or in comparing quantitatively the the impact of one variable on another in differing contexts assumed to share the same basic pattern of causal relations, for example, certain cross-national comparisons. But the computed values derived from exactly identified models provide no consistency-of-estimate test of the model; rather, the basic pattern of causal relations is assumed to be known.

The techniques described in my paper will be most useful to investigators who are inclined to take neither the basic theoretical model nor the adequacy of the indicators for granted, since the models I have discussed provide a separate consistency-of-estimate test for the measurement model and, in the three variable models discussed, for the underlying causal model. The techniques based on single indicators and the instrumental variables approach, on the other hand, will be more useful to investigators who are either more confident of their knowledge base or more daring in making assumptions about the nature of underlying causal patterns.

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Commentary and Debate

ON ADAMS AND MEIDAM'S "ECONOMICS, FAMILY STRUCTURE, AND COLLEGE ATTENDANCE"

There are three major sections in the paper by Bert N. Adams and Miles T. Meidam ("Economics, Family Structure, and College Attendance," *American Journal of Sociology* 74 [November 1968]:230–39) which require comment. A brief quote and discussion are presented for the sections delineating (*a*) the assumptions underlying the research problem, (*b*) the relationship between the research findings and other appropriate literature, and (*c*) the theoretical framework in which the results can be interpreted.

The analyses presented in the paper are based on an undocumented and ambiguously phrased assumption posed in the prefatory remarks: "Intelligence has been found to have an effect independent of economics, the less intelligent being less likely to attend college. However, this effect is randomly distributed *within* socioeconomic status and family structural categories. We, therefore, suggest that family economics and economic values . . . account in large measure for variations in college attendance by SES and family structure" (p. 230). It is not entirely clear that the assumption is that the *effect* of intelligence on educational aspirations or outcomes is "randomly distributed *within* socioeconomic status." If that is the assumption, it is simply not supported by any data with which I am familiar. Indeed, there is a strong interaction effect of the two variables on college outcomes. The data from the national longitudinal study of Project TALENT show that in low SES groups those in the highest-ability quartile are from five to eight times as likely to attend college as are those in the lowest-ability quartile, while in the high SES groups those in the highest-ability quartile are only three to four times as likely to attend college as their low-ability cohorts (Schoenfeldt 1966). Other analyses from Project TALENT (Folger et al. 1969), as well as the Wisconsin follow-up studies (Sewell and Shah 1967), have shown similar results and have also demonstrated that from one-half to two-thirds of the observed effect of SES on educational outcome is actually due to IQ differences. These differences cannot be entirely explained by *between* SES differences, nor can the effect of IQ be considered inconsequential *within* SES categories. To study the effects of economic factors, particularly with a dichotomous measure of occupational position as a proxy, one cannot disregard the confounding influence of ability. The consequences of dismissing this variable in the analyses by Adams and Meidam may seriously affect the conclusions of their study. However, I first want to examine their discussion of the relationship between their findings and those of others also reporting relationships between family structural variables and educational outcomes.

The authors have selected one of my papers as a primary focus for comparison with their results. Their major rationale for differences in the results is: "Bayer did not separate birth-order positions while controlling for sibship size, as he claimed. . . . Bayer's findings regarding intermediate

children are largely a function of his categorical divisions and tabular structure, which obscure sibship size effects" (pp. 237–38). This explanation for the discrepancy in the results between my study and that of Adams and Meidam is patently in error. While only the summary table collapsing across family sizes was presented, it was explicitly stated in my article that family size was indeed controlled in the analyses and in the reporting of results (Bayer 1966). When Hermalin (1967) made precisely the same criticism of my article, I subsequently presented the tabular data by SES, ordinal position, and *family size*. Inasmuch as Adams and Meidam cite this reference in their footnote 15, it is especially puzzling that they persist in their assertion. Although their second explanation (the possible effect of limiting my analyses to high school seniors) is perhaps tenable, a more likely explanation for the discrepancy between their results and mine is that their research design included the assessment of actual siblings. This "ideal" design was suggested in my recent *AJS* article as a primary requirement for further birth-order research (Bayer 1967*a*), and its use by Adams and Meidam lends credence to their results, if not to their conclusions.

The summary of their conclusions follows: "Family size, sex ratio, and child-space effects are all difficult to explain in a framework other than an economic one. The foregoing argument, which our data support, does not invalidate physiological or socialization hypotheses for explaining some aspects of human behavior and personality, but it does call into question these other orientations in explaining family structural variations in college attendance in American society" (p. 239). Adams and Meidam's results are no more difficult to explain by means of the physiological or socialization hypotheses than by the economic interpretations that they favor. The socialization hypothesis can, for example, be readily employed to explain why the sex-ratio effect on college attendance is observed for blue-collar but not white-collar females. The traditional definition of the woman's role may still exist primarily in the value systems of low SES groups. It may not be an inability to finance education which limits college attendance by blue-collar girls, but simply the expectation that a woman is to marry by, say, age 18 or 20, her defined adult role being entirely that of a wife and mother.

The physiological hypothesis could be easily advanced to explain the finding that greater child spacing increases the likelihood of college attendance by the later born within a sibship. Specifically, with increasing time between births it might be hypothesized that the mother has time to replenish the nourishing materials essential for the optimal development of fetal mental physiology. The social-psychological hypothesis might also be employed to explain these same results: a later child in a widely spaced sibship may be likely to receive treatment similar to that of a first-born or previously born sibling, thus developing similar levels of need achievement, aggressiveness, independence, or other traits resulting from socialization processes which may be conducive to the general outcome of similar levels of educational attainment between siblings.

The promise of further research by Adams and Meidam, which wi include a larger, more representative sample and incorporate direct que tions regarding the reasons for achieving a given level of education, ma well allow more compelling conclusions and explanations with regard t the mechanisms which link family structural variables to education outcomes. It is also hoped, however, that a less crude measure of socio economic background will be employed and that measures of ability wi be incorporated into their research design. Without such refinements, th conclusions will continue to reflect only simple speculation which, whe framed by restricted economic interpretations, perpetuates the folktal that financial aid is a panacea for the country's educational ills and man power requirements.

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THE AUTHORS REPLY

Alan Bayer's response to our paper on college attendance continues the task of focusing the issues regarding who goes to college and why. His comments include three elements: first, points upon which his earlier results and our results differ; second, points upon which we are talking past each other or else where he exaggerates our differences; third, points where we were in error.

Bayer notes the discrepancy between his finding of an advantage for first- and lastborns and our finding of no birth-order effect, and he—as we did—puzzles over it. He feels that our use of actual siblings may be key, but he does not indicate why. If this is in fact the best explanation, the reason may well lie in the demographic and cohort arguments with which we criticized Schachter's (1963) work. That is, when the researcher draws a cross-sectional sample, he includes one or at most two members of any given family. Firstborns among high school seniors have parents who are

an average of several years younger than those of lastborns, though the respondents' own ages are identical. Thus, the firstborns have the advantage of the more favorable attitude of younger parents toward education. On the other hand, the youngests in the same sample have the advantage of the gradual economic betterment which occurs within the careers of most family units. With a large sample such as Bayer's, these two effects crisscross or interact, resulting in a slight advantage for oldests and youngests. If this result is correct, a sample of whole families should effectively dispel the influence of differential educational values among different-age parents, leaving only the incremental economic effect favoring later-borns. It should be reported that in our current study, which includes all offspring from 585 whole families, precisely this effect appears, with the oldest male *least* likely and the youngest male *most* likely to attend college, regardless of SES or family size.

There are several points upon which Bayer and we are either talking past each other or where he exaggerates our differences. (1) Bayer somehow assumes that our comment regarding intelligence being distributed randomly with SES and family structural categories has been proved incorrect by Project TALENT and Sewell's work. Such findings, however, deal only with SES, not with family structure, and thus cannot be used to invalidate our assumption. (2) For some reason Bayer wants to set up the socialization and physiological theories as alternatives to our argument regarding economics. To do this he writes as if we had treated economics in a vacuum. For example, he says that our sex-ratio effect may simply be based on the traditional definition of women's roles operating "in the value systems of only low SES groups." Yet throughout we speak of economics (or available resources) and economic *values*, or the family values which determine the allocation of these resources. Furthermore, his notion of traditional role values cannot be used to account for the sex-ratio effect but only for the low numbers of blue-collar females attending college. That is, according to his argument a female with two sisters should be as unlikely to attend college as one with two brothers, which is incorrect. (3) Finally, his exaggeration of our differences is most evident in his treatment of the economic variable itself. In his own earlier article (Bayer 1967, p. 549) he noted that "parents do bear the major responsibility for financing undergraduate educations." Thus, allocation of resources must be a part of the explanatory pattern. He also arrives somehow at the conclusion that we are "perpetuating the folklore that financial aid is a panacea for the country's educational ills and manpower requirements." Our own conclusion is that economics—in the broad sense that we employ throughout the paper—is a determinant of educational chances "within which other factors, such as motivation and intelligence, operate." We do not feel that Bayer really means to state the case as either/or with respect to economics and economic values versus other possible explanations, but that is precisely the way his comments come across.

Finally, we must admit with embarrassment that we simply overlooked his own table, in response to Hermalin, in which he observed birth-order

effects while controlling for SES *and family size*. This was a most unfortunate oversight.

It is our hope that this sort of dialogue will not be an end in itself but will result in continued effort to go beyond correlations and relationships to an explanation of educational opportunity in the United States.

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TWO COMMENTS ON GUTTMAN SCALING

I

If the suggestions made by Schooler (1968) were implemented, an acceptable Guttman scale would not necessarily emerge. The primary criterion of "acceptability" must be theoretical, not statistical. Tests of reliability and validity must be utilized. That such tests will be developed and applied is unlikely, because scalogram analysis continues to be used primarily for heuristic purposes—"I wonder if I have anything here?"

Stephenson's work (1968) raises the issues of validity and reliability, and even publishes the items which did not scale so that the reader himself can wrestle with these "leftovers" which were seemingly part of the same unidimensional conceptual pool. Validation of his scale, and most others, rests on face validity, hardly a satisfactory criterion. The reader is asked to empathize with the measure. This is not to slight Stephenson's work, but merely reflects the present state of measurement in this area. It is difficult to find external validators and difficult to test and retest measures; these problems are amplified in the case of macrovariables such as modernism and modernization. Is education an external validator, part of the same dimension, or a completely distinct variable which may be related causally to modernism? This question cannot be answered by improved statistical techniques.

There are technical problems, as Schooler points out, but even here it is doubtful if his suggestions will offer us much assistance. The basic weakness with his first and third suggestions is that they are applied after the scale has been constructed; a preferable technique is Goodman's (1959) which is applied to the conceptual pool. Even if this basic weakness is overlooked, the suggestions are still not helpful. John D. Campbell's suggestions (I would have appreciated a reference) for intercorrelations between scale items overlooks the basic cumulative nature of a Guttman scale; it is highly unlikely that the most and least discriminating items would intercorrelate

at a significant level. The differences in distribution are too great (for a relevant discussion see Guttman 1953 and Burt 1953). The second suggestion, for the development of a new computer program, appears sounder although scales which I have seen constructed through the use of such programs have been poor. (I believe that both UCLA and the University of Hawaii have such programs.) One problem appears to be that of programming the desirable frequency distribution. I question whether even this criterion is of major importance; it seems to me that the quality of the items and their relationship to the concept being measured are of much greater significance. Frequency distributions carry little theoretical import.

Schooler's third suggestion is that scalogram analysis serves as a test for heterogeneity rather than homogeneity; the choice of terms is bad. Scales which are theoretically unidimensional often contain items which are characterized by their heterogeneity; this is to be expected since the concept being measured is often more abstract than the items contained in the measure. Scales can then be homogeneous or unidimensional at one level while the items remain heterogeneous. Again the basic criterion should be theoretical rather than statistical.

Care must certainly be taken not to produce random scales, but the greatest assurance against these results is more attention to the concepts being measured and to tests of validity and reliability. Revision of statistical concepts is secondary.

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II

After the scathing criticisms which have been leveled at Guttman scaling in recent years, one sometimes wonders why it has not been thrown out of the methodological kit bag altogether. Some, such as Robinson (1968) seem to suggest that the reason is cultural lag: the methodologically unsophisticated will take a while to see the light. This, we argue, is a mistaken view. There is a good reason for employing scale analysis, and the sophisticated would be more sophisticated still if they could only see this.

Schooler (1968) has recently pointed out some of the pitfalls that invalidate conventional scaling as proof of homogeneity. He misses the point in two respects. First, we do not often *prove* anything save in the classical

sense of subjecting it to test. We have accepted the idea that data support rather than prove our theories, and that these theories can be disproven but never confirmed. The philosophical underpinnings of these basic facts of scientific life are understood by some; their practical meaning seems to be generally accepted. We continue to test theories without demanding that only tests which can give proof positive be employed. The same frame of mind is in order for the validation of techniques.

Second, and perhaps more important, Guttman scaling is valuable as evidence of ordinality of measurement whether homogeneity is proven or not. If the validity of a scale is satisfactory from other points of view—be these theoretic or pragmatic—and the scale has a high and statistically significant coefficient of reproducibility and an acceptable coefficient of scalability, it may be taken to be ordinal with more confidence than any "simple additive index" (Robinson 1968) may be taken as ordinal, let alone interval. Occasionally, too, a scale of the "developmental" form (see Leik and Matthews 1968) will be found; suitable values of the appropriate reproducibility and scalability coefficients are empirical evidence of ordinality.

The issue which Schooler neglects most seriously, then, is that of measurement standards. Guttman scaling is not perfect by any means, and no one who has a technique by which he can generate data that logically *must* be ordinal or better in level of measurement should bother with Guttman scaling. But in the absence of something better, it is methodologically conservative to use Guttman scaling as evidence for ordinality rather than to construct an add-'em-up index and use hope as evidence for its assumed level of measurement. There are those (e.g., Labovitz 1967) who argue for the latter policy; for them there would seem to be no excuse for Guttman scaling. Those who are as conservative about their measurement standards as they are about their statistical tests, however, have a good and proper use for the technique.

It is to be hoped that arguments such as this do not serve to impede efforts to find better techniques of measurement in social science. The argument for conservative measurement standards is not an argument against the improvement of methodology.

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Errata

In Robert M. Hauser's "Schools and the Stratification Process" 74 (May 1969): 587–611, several errors occurred:

P. 589, col. 1, line 17 should read "more or less equality of opportunity . . ."

P. 595, col. 1, line 1 should read ". . . That is, if school interacts . . ."

P. 597, equations (1) and (2) should read

$$M = p_{MX}X + p_{MV}V + p_{MS}S + p_{Ma}U_a \tag{1}$$

and

$$W = p_{WX}X + p_{WV}V + p_{WS}S + p_{Wb}U_b \tag{2}$$

P. 604, equation (11) should read

$$c_j = \sum_k b_{mk}(\bar{x}_{jk} - \bar{x}_{k}) \tag{11}$$

P. 604, equation (13) should read

$$M = p_{MC}C + p_{MR}R \tag{13}$$

Book Reviews

Economy and Society. By Max Weber. Edited by Guenther Roth and Claus Wittich. 3 vols. New York: Bedminster Press, 1968. Pp. cviii+1469. $40.00.

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Shortly after getting out of graduate school, I put a good deal of effort into reading the untranslated parts of Max Weber's *magnum opus* with my graduate school German, living with the fear that the effort would be wasted because the part I was reading would be translated soon, but with the hope that if it were translated I would at least be sure I had got it straight. Rereading it now, entirely in my native language and in a continuous fashion, provides an occasion to comment on whether people starting out at this time to be sociologists should start as I did. Is *Economy and Society* a good place to start an intellectual biography now? What is there about this work that is of continuing value to the discipline?

There are clearly some parts of the book that have become archaic. The discussion of meaning at the beginning of the book, for instance, would be written quite differently by a modern scientist of Weber's quality, incorporating the recent advances in cognitive psychology and linguistics. Much of what Weber discusses philosophically has been investigated empirically.

Likewise Weber's treatment of calculation in economic enterprises is oriented to an old-fashioned financial balances calculation rather than to the representation of a causal system with monetary measures of the variables as in modern cost accounting, or to the devices of operations research and linear programming for rational calculation in the case of unpriced inputs or outputs. We know a good deal about rational planning of physical production quantities (rather than market price quantities) from detailed studies of the Soviet system (for instance, the recent brilliant study by David Granick in *Soviet Metal Fabricating*).

Weber's discussion of the direct relation of the state to the economy considers mainly the problem of the creation of money rather than treating the nation as a whole as a "household," as in modern national income theory, with combinations of fiscal and monetary controls.

Weber ignores the impact of the high rate of technical change in the economy on the definition of rationality. If an economy is advancing technically at between two and three percent per year, then technical stagnation will cut a firm's efficiency almost in half in a period of twenty years, as compared with other firms in the economy. Technical stagnation is, therefore, more irrational than almost anything that stupidity, sentimentality, or family ties might lead a businessman to do at any particular time. Keeping up with science and technology is more fundamental to rationality in the economy than Weber's treatment implies. Rationality should not be defined as a quality of decisions at a particular time but rather as a pattern of systematic improvement over time.

These examples of archaisms come mainly from Weber's analysis of the economy because that is what I know most about. I presume that there are similar substantial deficiencies in his analysis of politics, religion, law, or cities. Though the *best* of modern analyses are generally better than Weber

in the details, we could eliminate a lot of tiresome reading by cutting out modern analyses that are substantially worse. But the main value of the work is not in the details—it is in the architecture of the work as a whole.

Talcott Parsons's analysis of the architecture of the work as a whole is, roughly speaking, that the book is mainly about values and their influence on social organization. Reinhard Bendix's analysis is, again roughly, that the book is mainly about domination and authority. My analysis is that it is mainly about economy and society. I think Weber's main contribution was the way he used the model of classical economics to construct a theory of economic progress. Since much of the technique for this architecture is obscured by the brilliance of the detail, I will outline briefly the strategy of theory building I think Weber was using and describe briefly how some of the specific parts of the book relate to this basic structure. This will show why *Economy and Society* is a much better a book on economic development than all but a very few books on that subject written today. In my opinion, only Clifford Geertz sometimes approaches Weber's quality of intellectual construction in this field, and that usually in short spurts.

Each of the sections of the book can be thought of as an attempt to detail a given area of social life. Which organization of that area of life comes closest to being compatible with the growth of rational bourgeois capitalism by most closely satisfying the postulates of classical economic theory? What are the main alternative, nonpropitious forms of organization in that area of life? How do these alternative forms undermine rational calculation and exchange in the economy? In what ways was the development of that area of life different from other approximations to the propitious organization in the western European Middle Ages, Renaissance, and absolutist periods? The last question is important because such differences in the West might explain the growth there of a classical economic reality.

The areas of life to which these questions are applied are: (1) the structure of economic enterprises themselves, especially their accounting mechanisms and their embedding in markets (pt. 1, chap. 2); (2) kinship institutions in relation to the economy, especially the forms of appropriation and inheritance of economic opportunities, with the resulting kin structuring of economic enterprise (pt. 2, chaps. 2, 3, and 4); (3) more or less solidary suprafamilial interest groups, with a common dependence on some kind of economic opportunity or valuable social status, such as social classes, estates, and ethnic groups (pt. 1, chap. 4; and pt. 2, chap. 5; and mixed with political considerations, pt. 2, chaps. 11–16); (4) religious groups, and particularly religious suprafamilial ethical socialization for economic life organized by a society's ethical and religious leaders (pt. 2, chap. 6, and mixed with politics again, chaps. 14 and 15); (5) courts, judges, lawyers, and other structures for resolving civil disputes, especially in their aspect of making economic obligations predictable and calculable (pt. 2, chaps. 1 and 8); (6) the structure of local government and its relation to the central powers of government and also its relation to the military risks and opportunities of the society, with special attention to the government of commercial and manufacturing cities (pt. 2, chap. 16); and finally (7) the institutions for the application and control of violence, and the resulting institutions of taxation, of slavery and other politically enforced labor, of conquest, of public office holding, of politically induced disturbances in the system of civil law and property ownership, and generally other violence-

backed exactions from the economically active population (pt. 1, chap. 3; and pt. 2, chaps. 10–15).

For instance, the kinship institutions of a society facilitate economic rationality (in the limited sense of approximating the situation in which people will act as they are postulated to act in classical economics): (1) if families can own property without political and religious encumbrances and if most economic property is owned without such encumbrances; (2) if other kinds of bodies as well as kin groups can corporately own and control property; (3) if no legal restraints on sales of property in the interests of future heirs exist; (4) if families do not own public offices or places in a craft guild or otherwise have property rights which restrict free mobility of labor; and so forth.

As another instance, the central government is most favorable to economic rationality of a capitalist sort when the conditions under which violence will be used are strictly predictable from rationally organized laws and administrative regulations. Hence, various features of bureaucratic administration that prevent an official from using state power for his own benefit (as he typically does under patrimonial administrative systems) facilitate economic rationality. The first achievement of bureaucratic government, then, is to render lower officials controllable by higher officials. But if these higher officials, in turn, are despots with "irrational" political objectives, official actions are still unpredictable. Lower officials controlled by higher officials, who are controlled, in their turn, by rationally organized law and rational technical training, provide the best governmental situation for satisfying the postulates of the classical economic model of the economy.

The reason we sometimes get lost in a wealth of detail in Weber's treatment of each of these areas of life is that he insists on telling us how some fifteen or twenty major cases look, superficially, like rational-legal bureaucratic authority but, in fact, are not. He then details how these cases work, how they might be grouped into *types* of nonpropitious circumstances, and how the appropriate institutional forms grew up in the late medieval Occident. Sometimes one gets exasperated with being brought almost to the climax of of propitious circumstances for capitalistic rationality only to have some *differentia specifica* turn him aside at the last moment. I still do not really see why the ancient Greeks did not make it, but that is probably because, of all the historical blank spaces in my mind, ancient history is the most massively blank. But at other times Weber is so movingly brilliant, so reorganizes the average sociologist's fragmentary knowledge of intermediate-level ("feudal") societies into meaningful patterns, that the reader loses interest in capitalism and starts wondering what will happen to the lords, ladies, monks, and peasants.

For instance, chapter 15 of part 2 is about the relation between the state and the priesthood and the consequent interpenetration of state administration and religious interests. The separation of church and state and the secularization of law and administration are good for capitalism. So far, we are in the main part of the architecture of the work. But Weber gets carried away with the distinction between caesaropapism (appointment of bishops by the king) and hierocracy (subjection of the king to appointment and confirmation by the priesthood) and its working out in religious and political structures. Many of the differences between English caesaropapist history (after the break with the Roman Church) and, say, French history,

have interesting similarities to the differences between the Eastern Christian caesaropapist empires of medieval times and Western developments. Even if this were not part of a larger architecture, translating this chapter alone might justify producing a forty dollar book.

The chief value of having the entire book in English is, I think, that it allows us to suppress our inclination to get caught up in the cornucopia of alternative forms, sometimes brilliantly outlined in a chapter. When we suppress that inclination, we see that the book is a detailed statement of the conditions under which the classical model of the economy works. It is therefore a statement, in general theoretical terms, of the specific social phenomena to which the discipline of economics as we know it applies. I think that it is a correct statement for the most part. Most of the criticisms made of Weber's economic sociology are irrelevant to the main problem because the architecture of the work has not been understood: the critics have perhaps reshaped the noses of some of the decorative gargoyles on the edifice.

The annotations to different parts of the book were done by different people. This gives us the opportunity to compare types of rationalization of scholarship. Max Rheinstein, who annotated the section on the sociology of law, is clearly a mind of the same order of magnitude as Weber himself. He has treated Weber's text as a statement about the world, and in his footnotes has compared the text with the world. He is the only annotator who sometimes says, "Here Weber seems to be mistaken," and then goes on to say what the facts of the case are and what it means for the theoretical point under discussion.

Talcott Parsons annotated the section which gives descriptive concepts about the types of economic organization. Parsons treats the text as a system of concepts rather than as a theory about the world. When he finds Weber in error, the authorities quoted against him are other theorists—for instance, he quotes Oscar Lange in his criticism of Weber's old-fashioned treatment of pricing under socialism. Parsons is much inclined to fuzzy discussions of the relation between the meanings of words in English and those in German, and between common German meanings and Weber's neologisms. The tendency of sociological theorists to discuss social life in an autistic language apparently has ancient and honorable roots.

The highest level of theoretical discussion that the other annotators reach is discussion of the fuzz of translation. They treat the text as a reflection of Weber's mind rather than of the world and only document things that indicate what Weber thought rather than using the footnotes to tell us what is true. The annotations are scholastic in the bad sense of staying within the sacred tradition itself without relating the tradition to the world.

In contrast, I would give Rheinstein about the amount of credit I give Weber for writing the sociology of law section. The section is about twice as valuable with the notes as it was when Weber wrote it. Parsons I would give considerably less credit than Weber, while the others should get credit for the drudge work of translation and cross-referencing within the sacred tradition itself. Much more recognition should be given for this type of work. (But I hope I someday write a book that seems worth annotating to a man of Rheinstein's caliber.)

The footnotes are in the worst possible place. Before I tell you where they are (you would never guess), I want to say a few words about footnotes and

publishers. Only by understanding the dynamics of footnote publishing will you be able to believe what they have done with the footnotes. Like tables and graphs of data, footnotes are designed for readers who want to know whether the statements in the text are true. Thus, footnotes, like tables and graphs of data, are used in journals and books intended to be read by scholars and by practitioners in fields where it matters whether the professional is right, such as, law, medicine, engineering, and so forth. They are not used where the reader needs material that is "interesting" or "relevant," but in which they hardly care whether it is true. Thus, in journals of applied social science, in introductory textbooks, in psychiatric journals and monographs, in advertising copy, there are few footnotes.

The problem of a publisher of Weber is that he judges, correctly I imagine, that the average reader will be a graduate student who will have to answer questions on his prelims of the form: "Discuss the relations between Quakerism and this-worldly asceticism in Weber's theory of the origins of enterprises oriented to capital accounting." The student will not have to know whether Quakerism actually did produce a rational ascetic life in this world as frequently as did Calvinism (as Weber argued). Nor will he be asked whether it is true or not that the legal, economic, and technical preconditions of capital accounting were created before the Reformation in countries which never became Protestant. He gets a high pass for not making the common mistake of identifying the Protestant ethic with Calvinism, and the mistake of associating capitalistic enterprise with the spirit of capitalism. For the majority of readers, then, this will be a text, rather than a scientific work. So the publisher does not want to spend the money to put footnotes where the reader can easily consult them, namely, at the bottom of the page.

But publishers have a hard time getting "interesting" and "relevant" work without footnotes, evidence, and other "scholarly apparatus." Most people who are smart enough to write (or translate and edit) a book care about whether it is true and hope to write for readers who also care. While the author or editor fights to keep the footnotes and the evidence near the text which they support, publishers push for eliminating or hiding them. In this book, the classical conflict between editor and publisher has been resolved by splitting the difference. The footnotes are separated from the text, but printed not in the back where the reader might find them but rather about halfway between. Then, in a glorious exercise of idiocy, the reader is not told in the text where the footnotes are. The reader must find the footnotes as follows: First observe the top right of the left-hand page you are reading to obtain the chapter number; then consult the "analytical table of contents" for the pages of the notes. Or you can leaf through the pages rapidly until the number on the upper right of the left-hand page changes, and then leaf slowly back until you run into the notes. This works unless the chapter is a long one. If the chapter is long, the number you have to use is a lowercase roman numeral on the upper left of the right-hand page. If an arabic numeral appears there, use the chapter number.

So my answer to the question of whether people should still start their sociological intellectual biographies with *Economy and Society* is yes. It would be a much more enthusiastic yes if Max Rheinstein had annotated the rest of it and if the annotations were somewhere where they could be found.

Beyond Economics: Essays on Society, Religion, and Ethics. By Kenneth E. Boulding. Ann Arbor: University of Michigan Press, 1968. Pp. 302. $9.50.

The Temporary Society. By Warren G. Bennis and Philip E. Slater. New York: Harper & Row, 1968, Pp. 147. $4.95.

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Boulding tells the reader that his essays are to be regarded as "errant missiles blasting off . . . in the general direction of a more unified social science" (p. v). The effort of Bennis and Slater might be similarly described.

Those who are willing to read Boulding's collection with full awareness of the errant character of the intellectual missiles can get much from them, as from Riesman's *Abundance for What*.—or, for that matter, from the notebooks of Samuel Butler or the collected plays of George Bernard Shaw. The notion, for instance, of a "role" as a "hole" in an organization, is illuminating; and additional insights are provided by calling an organization a "related and orderly set of holes in which everything is the context for other things" (p. 131). Perspective by incongruity, in Kenneth Burke's terms, is liberally supplied. The presentation of "economic development" as primarily by "learning process" (p. 144) is obvious, once stated, but was unfamiliar to me. The very title of the essay on "expecting the unexpected" alerts the reader to expect surprising perspectives on dealing with surprises! And he gets them.

I did not find any systematic theory, or approach to, or method of, handling general systems. Indeed, ironically enough, one of Boulding's insights on a peripheral matter is highly apropos! He argues that we need "specialized intellectual middlemen" and that such "middlemen unfortunately seldom receive the status or credit which their function in society deserves . . . despised by the specialist as shallow . . . even when performing a vital intellectual function" (p. 147). The examples he gives are of librarian and bibliographer. The question which springs to mind is: could an editorial middleman have pulled out the general characteristics—obvious no doubt to Boulding, but hardly communicated to the reader—in his work? Someone should do for him what such writers as Abba Lerner did for Keynes. Although Boulding discusses differential reward systems and although he emphasizes learning theory, he does not tell us how intellectual journalists can be rewarded for the kind of reorganization he needs or how we can learn (especially if our training has not been in his branch of economics) to get the general pattern on which his aperçus are probably based.

Such reorganization would probably make a separate book out of the last two parts. Here are essays which in the best sense of the term are excellent sermons but which have (so far as I can see) no necessary connection with what goes before. For citizens as such, the sermons in the third part are unquestionably the most valuable part of the book.

The contrast with the Bennis and Slater book is devastating for the latter. Such unity as they give us is supplied by the idea referred to in their title; we live, they say, in a society where relationships are increasingly temporary, and in which many of us must learn to fall in love quickly, fall out of love quickly, commit, uncommit, and recommit ourselves with minimum pain and maximum ease. In the context of history, one doubts the unique-

ness or general truth of what they say—although no doubt many professional men have experienced some part of what they are talking about since 1941. Nevertheless, commitments to professions by "cosmopolitans" may, for anything Bennis and Slater tell us, have increased, while commitments to localities or organization have decreased. They fail to make allowance for the fact that the long-distance telephone and the jet airplane make it possible to keep up commitments and contacts in a way impossible until recently.

There is nothing to show that the trend they single out will continue or that in times past (e.g., the Ottoman Turks in the days of their conquests, the citizens of Germany during the Thirty Years' War, etc.), there have not been groups with much more temporary commitments than our own; for instance, slaves—who were also tutors and scribes—in various periods.

Otherwise, the book throws together in confusingly self-contradictory and unanalyzed procession a large number of clichés and observations, most of which at some time or another are true, but which also at some time or another are false. Sociologists will be interested to learn that "only a sociologist could make . . . the mistake" of attributing divorce to the decline of significance in the modern family (p. 88). Evidence is not supplied, either for the frequency of this mistake among sociologists or for its absence among nonsociologists. The relevance of the contention to the argument happens also to be opaque.

One is overwhelmed with such profound insights as " 'revitalization' [means] all the social mechanisms that stagnate and regenerate as well as the process of this cycle. The elements of revitalization are . . . an ability to learn from experience . . . an ability to direct one's own destiny" (p. 71). The authors make considerable play (p. 61) with the allegation that the academic man has regarded "with dark suspicion . . . the world of reality . . . particularly monetary reality" and deprecate the tendency of academics to be either "rebellious critics" or "withdrawn snobs" (p. 61). Things, they think, are better now. But in reading their lucubrations, I am reminded of one of my clients (who had unwillingly inherited me as a consultant from his predecessor) who said, very sensibly, that he regarded all social science consultants with suspicion because when they were not being foolishly obvious, they were being foolishly pretentious. If one evaluates Bennis and Slater as producers of an ideology, the contrast even with McLuhan (whom they seem to regard as a predecessor or competitor) is considerable. He has a sense of poetry which they lack. Sinclair Lewis should be living at this hour! What he did to George Babbitt and Elmer Gantry would pale into insignificance if he were to take on Bennis and Slater!

Tradition and Revolt: Historical and Sociological Essays. By Robert A. Nisbet. New York: Random House, 1968. Pp. 308. $4.95.

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It is a lamentable observation about American sociology that this collection of essays is so welcome a publication. The sad fact is that most of Robert Nisbet's papers have not been available until now to a wide sector of sociologists; they were originally published in journals, not the common stock of

sociological reading, and have gone comparatively unnoticed. At least a half dozen of the fourteen essays in this volume are remarkable contributions to the analysis of contemporary society and should be obligatory for all of our graduate students. For the past twenty-five years, Professor Nisbet has combined an understanding of political philosophy and history with the analysis of the major issues which have preoccupied sociologists in their efforts to provide an intellectual perspective toward modern societies. Almost alone among us, he has had the knack and the wisdom to see how the persistent issues of political philosophy have been recast by sociological analysis and to place the description of modern society in the context of those abiding issues.

In this volume, Random House has reprinted fourteen of Nisbet's essays beginning with a 1943 paper, "Rousseau and the Political Community," and ending with "Conflicting Academic Loyalties," a 1967 paper. While these touch a variety of subjects, they are united by a common perspective of sociological analysis and Burkean conservative philosophy. As analysis and description, Nisbet's diagnosis, detailed in his *The Quest for Community*, is another version of the *Gemeinschaft-Gesellschaft* thesis: "the older primary centers of association have been superseded in institutional importance by the great impersonal connections of property, function, and exchange. These connections have had a liberating influence on the individual" (p. 62). His political philosophy is expressed in several of the essays, including the well-known "Conservatism and Sociology." The transfer of allegiance from intermediate institutions such as family, church, class, and kin society to the state has meant both the centralization of power in political institutions and the self-alienation attendant on individualism resulting from the loss of community with a primordial social group. "A genuine philosophy of freedom is inseparable from some kind of pluralism: it is inseparable from a distinction between state and society" (p. 47).

These ideas are woven through the variety of essays in this volume. In the papers dealing with political philosophies, these themes appear as issues of the power of the state and the virtues and vices of pluralism and monism. The essays on Rousseau and on conservatism, plus a paper on the French writer ("The Politics of Pluralism: Lammenais"), and a superb one on American politics ("Power and the Intellectual") are, taken together, a significant addition to the analysis of political ideas and their sociological import. In two brilliant essays, "The Decline and Fall of Social Class" and "Kinship and Political Power in First Century Rome," Nisbet has given two examples of the decline of communal institutions and their replacement by an individualism based on state power. Two other papers, "Sociology as an Art Form" and "History and Sociology," are excellent discussions of the methodological and ideational sources of sociological perspectives and limitations. Three papers on current problems of academic institutions seemed anticlimactic and below the quality of the rest of the volume.

While I must admire the organization and significance of the questions Nisbet poses and the large historical frame on which he works, the viewpoint maintained seems to me too romantic a myth for sociologists to still use. Modern society has too many pluralities of ethnicity, of familial ties, of racial conflict, and too many instances of the limits of central power, in organizations or governments, for us to use the Durkheim-Toennies formulations as anything but weak and imperfect models. Better history reveals to

us that past centuries have by no means been the communal utopias of *Gemeinschaftliche* sentiments but that "society" has seldom been like the first chapter of an introductory textbook. Anarchy, alienation, conflict, and insecurity appear in Marc Bloch's Hobbesian accounts of feudal Europe as they do in peasant villages of contemporary developing areas. The life of man has been nastier, more brutish, and shorter than in much of modern society. Nisbet's dichotomies are too vast and too starkly oppositional to catch the multiplicity and ambivalence of social life; his abstractions of "State" and "Society" too reified to reveal their tenuous quality and close interaction. That interaction has been one of the great themes of much of modern political sociology in its empirical phase, from Marx to Seymour Lipset.

Generally, I take a dim view of collections of man's essays unless they present a new theme or are revised to be-to-date. This is an exception. It brings to visibility papers whose thought, literacy, and style should never have been obscured. If I am unconvinced by the argument, the author's clarity and insight have made me more aware of my own thoughts through understanding their opposites. That is no mean feat and quite enough for one book.

Revolution and Counterrevolution: Change and Persistence in Social Structures. By Seymour Martin Lipset. New York: Basic Books, 1968. Pp. xiv+466. $10.00.

Kalman H. Silvert

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This book is big. Heavy to the hand, it ranges across much time and all the continents, consecrating men and man in the exhaustive and informative footnotes whose style Professor Lipset had earlier made famous in his *Political Man*. In a clean and readable prose rarely lightened by a smile or an irony, the author weaves his determinations regarding methods and the theoretically significant into a bolt of whipcloth, heavily sized with data culled from a dazzling variety of sources. The author's self-awareness pays off, for this collection of essays, originally published between 1964 and 1968 in various journals and anthologies, falls into a coherent whole, a true book examining the same essential approaches and materials from many different perspectives.

The volume's technique is properly established in the first chapter, "History and Sociology: Some Methodological Considerations." The argument, simply put, is that "all social science is comparative." The data for such comparisons must come from historical analysis as well as the generation of other kinds of empirical data on contemporary societies. Thus, sociologists should infuse historical learning with their disciplinary questions, and historians in turn should become sensitized to the ways and concerns of the social sciences. Rising to his own challenge, Lipset then seeks to explain variance between the United States and Canada in terms of the revolutionary experience of the former and the counterrevolutionary national origins of the latter—hence, the book's title. The comparative exercise, however, is by definition a testing of theory, whether in the rudimentary sense of establishing the explanatory utility of a set of categories, or the more sophisticated

one of predicating relations among variables within a dynamic system bounded by *ceteris paribus*. Lipset, in full recognition of the theory-methods link in comparison, also sets out in this first chapter to show that "structure and values are clearly interrelated" (p. 63). For him, "any value system [is] clearly derivative from given sets of historical experience," and by implication, values are in the independent position vis-à-vis political and economic institutions, seen as dependent. "In comparing the United States and Canada the emphasis has been more on the effect of values on political development than on economics. . . . The next chapter . . . examines the changes in the value system which may foster emergence of an entrepreneurial elite [in Latin America]" (p. 63).

Chapter 4, "Issues in Social Class Analysis," is a highly competent synthesis of the history of thought concerning stratification and politics, sometimes brilliant in its deft crystallization of schools of thought and always incisive in revealing how the several persuasions differ among themselves. Lipset concludes that the functionalist and Marxist approaches to stratification share the view that political power is a social utility and that both join power and stratification theory (p. 148). With this linkage set, and with his stated preference for a multidimensional approach to stratification, Lipset is now ready for the remainder of his book. He turns to "Class, Politics, and Religion in Modern Society: The Dilemma of the Conservatives," and then to four chapters on "political cleavages" in developed as well as developing societies, and finally to studies of "three pioneers of comparative analysis," Harriet Martineau, Moisei Ostrogorski, and Robert Michels.

Such sweep must always lead an author into trouble. The most obvious difficulty is that nobody can cover so many diverse cases without some misinterpretations arising from insensitivity to cultural particularities or simple inability to control all the factual material. For example, a passing reference to the twenty-three independent republics of the Western Hemisphere is forgetful of Jamaica, Trinidad, Guiana, and the other Caribbean detritus of empire. This illustration is chosen because it is plainly unimportant to the book's theses, although other slips are more subtle and would demand an unattainable area knowledge for their avoidance. This reviewer suggests that the book not be read in a search for such flaws but with full appreciation for its grasp and virtuosity.

Nevertheless, doubts arising from other sources troubled this reviewer. I suspect that Lipset had both *Zeitgeist* and organizational problems with this book. The articles must have been in preparation from about 1960 to 1966 or 1967. Although some passing references to Vietnam and other American crises appear, the tone seems to echo days of greater national self-confidence, when we were all secure in the knowledge that developed was very different from underdeveloped. An old-fashioned air envelops us as we read passages still taking it for granted that ideology dies as industrialization blossoms. Perhaps Proudhon and Bakunin and Croce and Mosca no longer concern us, but Marx remains alive, as are Marcuse, Fanon, Cleaver—and even Bell, Howe, Kristol, and Lipset. Direct analysis of the major crises of the second half of this decade are not readily found in this book, although it undoubtedly has much to say on these matters if the reader wants to make the effort of fitting the cloth to the new shapes.

The greatest unease for this reader concerns an occasional lack of internal fit. For example, on page 180 we read the bald statement "it is not really

possible to speak of a 'Western' political system." Earlier, on page 157, we find that "an unpolitical Marxist sociology would expect the social class relationships of the United States to present an image of the future of other societies that are moving in the same general economic direction." Lipset leaves no doubt that he shares the view that the more industrially developed society shows to the less developed one "the image of its own future," in Marx's words. The strength of a historical sociology is precisely its ability to permit satisfying intellectual resolutions of such questions as the degree of westernization "necessary" in modernization, and the difference between modernization and development. The book has altogether too many undemonstrated assertions. I will cite only one more: "The more developed nations not only can avoid the experiences of the less developed Communist societies, but they can and are moving toward socialism while preserving political freedom" (p. 238). This reader, for one, found no satisfying support for that comforting statement so reminiscent of old beliefs in the inevitability of certain social processes.

Cast in the mold of *Political Man*, this book will probably not have the same impact. Perhaps times have changed, and a faith in the virtues of democratic practice is no longer a brave and praiseworthy stand. Perhaps the day belongs to the gut reaction and not to reason. Whatever the case, and given its limitations, *Revolution and Counterrevolution* is a collection of lasting merit, to my mind a marked intellectual advance over *Political Man* testifying to Lipset's continued growth. May he someday receive the same warmth of treatment that he accords Harriet Martineau in the most touching, modest, and affecting essay of the book.

La Révolution introuvable: réflexions sur les événements de mai. By Raymond Aron. Paris: Librairie Arthème Fayard, 1968. Pp. 187. Fr. 15.

Le Mouvement de mai ou le communisme utopique. By Alain Touraine. Paris: Editions du Seuil, 1968. Pp. 298. Fr. 21.

Bernard Gustin

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The eminence of these authors is enough to stimulate interest in these two case studies, published last winter, of the "events" that brought France, and especially Paris and its industrial suburbs, to a halt in May 1968. That two such opposing views of the events are not only argued but brilliantly defended illuminates not only the underlying issues that triggered the strike but also the differing perspectives of the observers.

Aron's text, to which his *Figaro* columns of the period are appended, takes the form of an extended dialogue between the author and French editor Alain Duhamel; its purpose is to dispel the romantic mystique in which, even after several months had passed, the May events were enshrouded. Aron views the entire sequence of events not so much as a drama as a fantasy. His admitted refusal to take the students seriously has its roots in what he sees as their irrationality and the absurdity of their thoughts and acts; he does not hesitate to view many of his colleagues in the same light: "Why ought one to admire professors of constitutional law who violate legality and find pseudo-justifications for pseudo-revolutionary structures and pseudo-innovative constitutions, none of which are capable of functioning?" (p. 134).

Even where he places himself somewhat in agreement with the students, ron finds their views at best naïve and at worst dangerous. In the case of iiversity reforms, for example, he suggests various problems on which he is been outspoken himself, but when discussing specific solutions, finds iat he cannot accept those that "in effect deny the intrinsic inequality etween students and professors] of the learning relationship" (p. 70).

Besides discussing the breakdown of rationality among the students and any of their teachers, Aron devotes considerable attention to the political rategy of the French Communist party and to the conservative role of the rge labor unions, both of which he views as stabilizing influences during ie chaos; the French government itself he criticizes bitterly for its de facto dication of power during the latter part of May.

What to Aron constitutes a regression to pre-Marxist utopianism, Touine interprets as evidence of a post-Marxian class consciousness based 1 new economic and technological features of capitalism as it is evolving . France in the late 1960s. In particular, he links the resistance of young ictory workers to ultrarationalistic technology with that of young intellecials to university programs that, given the French occupational structure, iust lead them to administrative or technocratic positions in industry and vernment. The university itself is transformed, by processes at once ibtle and permeative, from a place of learning to one of ritualistic indocination: "At Nanterre [the suburban campus where Touraine teaches and here, under the spirited influence of sociology undergraduate Daniel ohn-Bendit, the events had their manifest origins] one does not live, but ther exists, or, more exactly, moves about and is exposed to a series of roadcasts, of teaching productions" (p. 99).

For Touraine, the events are but a sign of the future, a beginning; but nce, as he readily admits, the utopians do not seem to have goals, platrm, or program more specific than a Marcusian liberation from coercion, ie wonders what it is that is being begun. Ultimately, Touraine's new insciousness, which Aron considers a puerile rejection of authority on the art of the students, is not simply utopian, but becomes paralyzingly so: Parce qu'on ne voulait plus que la société fût un spectacle, on prit un ectacle pour la société" (p. 215).

Yet, despite the somewhat utopian evaluation of the utopians, Touraine's ook repays careful reading: his analysis of the role of the factory workers 1 the various stages of the events is particularly insightful and acute.

'he Conflict of Generations. By Lewis S. Feuer. New York: Basic Books, 969. Pp. ix+543. $12.50.

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'he Conflict of Generations attempts a macroscopic interpretation of student urest. A universal theme of history, Feuer claims, is generational conflict, laybe of more importance than class conflict. But unlike class conflict, 'hich is tied to such concrete issues as wages and working conditions, genrational struggle is a product of the human psyche, coming from "deep, nconscious sources"—"vague, undefined emotions which seek some issue, ome cause, to which to attach themselves."

A society is ripe for student revolt, he states, when "de-authoritization" of the older generation occurs. This may result from a defeat in war, internal decay of a society, or an inability to bridge the gap between tradition and modernity. In any case, "student movements are a sign of a sickness, a malady in society."

Let me note what is most commendable about Feuer's book. First, it reflects a great deal of scholarship. The studies of the Bosnian, Russian, and nineteenth-century German student movements are especially interesting, and it is not accidental that these cases best fit Feuer's theoretical framework. Second, Feuer tries to apply one explanatory scheme to a variety of events. All too often social scientists complicate matters by applying inconsistent ad hoc explanations to fairly similar phenomena; the result is obfuscation rather than clarification.

But does Feuer's thesis work? I think not. Recent events argue very strongly against a purely psychological explanation of student revolts. Take Germany for example. Feuer claims that generational conflict was absent in the immediate postwar period because the student movement itself, not the older generation, was "de-authoritized." This was a studentry discredited by its failure of character and betrayal of intellect: it could claim no mission to redeem the others. The elders of the previous generation . . . shared much less of the national guilt than the Nazi students, for the elders had been largely displaced and spiritually emasculated by the Nazis." Now that the German student movement is in full swing, is it relevant that Germany is closer to one-party rule than at any time since 1945, or has the older generation been simply "de-authoritized" once more?

Feuer's account of Japan is likewise unsatisfying, and it is inconsistent with his interpretation of Germany. The Zengakuren emerged in 1948 because of "de-authorization" of the older generation which had lost the war. But, according to Feuer, a new generation that has "none of the experience of de-authorization of the fathers" has entered the Japanese universities, and Zengakuren has passed its zenith. The charred remains of Tokyo University testify otherwise. And there is more in store—wait until the United States–Japan mutual security pact comes up for ratification in the fall. About India, all Feuer can say is that generational revolt is directed against university authorities because of the sacredness of the family. There is no mention of appalling unemployment among university graduates or of the fact that 80 percent of ordinary A.B.'s who get jobs end up as clerks.

The most disheartening feature of *The Conflict of Generations* is its vindictiveness toward students. Feuer accuses students of amorality of political means and of destruction of both themselves and their espoused goals. What is worse, students are held responsible for too many of the world's ills. "The impact of a generational struggle and a student movement . . . was in large part responsible for the outbreak of the First World War." "The German students supplied Hitler with the leaders and heroes of his *Sturmabteilungen* [storm troopers]." "As one reviews the gloomy story of the Russian student movement, its predisposition to regicide and suicide, one has the feeling that it may have corrupted and sickened even further the already corrupt and sick Russian society." Feuer's analysis of Berkeley is even less dispassionate. "The moral level of the University of California became the lowest in the history of American education."—His evidence? Student unrest "brought to Berkeley an astonishing increase in rape. Twen-

ty-one instances of rape were reported in 1965; by 1966 this figure had increased by more than 100 percent to fifty-five cases." Come now, Professor Feuer.

Despite the book's flaws, it remains possible that Feuer's underlying premise is correct. But verification of psychodynamic propositions is tricky; one is almost compelled to rely on anecdotal evidence such as the remark of a Harvard student who could see nothing wrong with "copulating the files" in University Hall. And if, indeed, generational conflict is universal, then is it not more important to study the *structural* conditions which either diffuse this energy or focus it upon sources of discontent? Interestingly, Feuer suggests one of these conditions. In discussing students in colonial America, it is noted that "the intellectual student . . . knew that he would be presently called upon to help govern and administer his society. No barrier of generational hegemony was interposed against him, for all talents were needed." I wonder if students in the contemporary United States would remain restive if they were called upon to help govern and administer.

Black Rage. By William H. Grier and Price M. Cobbs. New York: Basic Books, 1968. Pp. viii+213. $5.95.

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The central thesis of *Black Rage* is that black people in America have suffered unbearable oppression at the hand of white racists and white racist institutions; that this oppression has instilled within all black people a sense of hatred of white people and self-hatred as well; and that after acquiescing in their own suffering for centuries, they are determined to throw off this oppression by any means necessary. It is a familiar thesis to readers of this *Journal.* But it has seldom been stated with such passion, eloquence, and authority. The authors have broken new ground in analyzing the dynamics of human cruelty, the oppressive potential of national character unchecked by powerful opposition, and the dysfunctional responses people often make to these forces of oppression.

The dominant experience of the black man in America, they argue convincingly, has been oppression, and the dominant response of black people to this oppression has been grief and depression.

Black men have exhibited a number of strengths, they admit, "but the overriding experience of the black American has been grief and sorrow." And they urge that "depression and grief are hatred turned on the self." The authors speak often to the universality of feelings of hopelessness and despair among black people, cutting across class, age, sex, and residence. They urge white people to try harder to understand this despair which turns increasingly to rage. "For a moment," the white reader is implored to "be any black person, anywhere, and you will feel the waves of hopelessness that engulfed black men and women when Martin Luther King was murdered. All black people understood the tide of anarchy that followed his death."

The authors are very convinced (and very convincing) that the rage which has grown out of despair and hopelessness is a healthy and permanent

feature of the black experience which will endure and take on a variety of forms as long as black people are oppressed. "No matter what repressive measures are invoked against blacks, they will never swallow their rage and go back to blind hopelessness."

While *Black Rage* is not put forward by the authors as a scholarly treatise and lacks much of the style and specifications of traditional scholarship, it is nevertheless profoundly sociological in that it speaks to so essential an aspect of the relationship between society, subcultural conditioning, and personal response. At the same time, it is exceedingly well written—almost novelistic in quality. Little wonder that it has been made required reading by a journalism faculty of a major university as an example of good writing. It is indeed hard to imagine psychiatrists—and two of them at that—writing so lucidly and engagingly about important social problems. It must be observed that *Black Rage* came not so much from the content of the professional training and professional practices of these two bright and sensitive young men, as from the content of their experiences as black men who have felt the oppression of this racist society. This observation will strike some readers as odd, for were not Grier and Cobbs born to privileges denied many other men, and have they not surmounted and overcome all the badges of inferiority ascribed to black men of less achievement? But the reader who reacts thusly has not understood or accepted the central message of *Black Rage*, namely, that all black men have suffered and all are angry.

The book should be read thoroughly and carefully for what it is, not distorted, as many popular reviewers have done, to characterize black people as "sick" or evaluated as the last word on the black man's reaction to racism.

Black Rage is a most heuristic book and should be read by sociologists as a corrective, a stimulus, and a guide to their own perspectives and analyses of social relations.

Black Americans. By Alphonso Pinkney. Englewood Cliffs, N.J.: Prentice-Hall, 1969. Pp. xvii+226.

Jewish Americans: Three Generations in a Jewish Community. By Sidney Goldstein and Calvin Goldscheider. Englewood Cliffs, N.J.: Prentice Hall, 1968. Pp. xvii+274. $5.95.

William S. Kornblum

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When it is completed, the Prentice-Hall "Ethnic Groups in American Life Series" (edited by Milton Gordon) will be a welcome addition to the sociology and social history of ethnicity in this country. Although the volumes by Alphonso Pinkney and by Sidney Goldstein and Calvin Goldscheider are studies of groups for whom the literature is already considerable, future titles will include studies of Mexican-Americans, Chinese-Americans, White Protestants, American Indians, Puerto Ricans, and Japanese-Americans—almost all groups which have been somewhat neglected in the recent ethnicity literature. Since each volume will cover family life, generational differences, structural and cultural assimilation, and historical background, in addition to other subjects, we expect comparability among the various

mes in the series. Indeed the promise of comparability is one of the ıctive features of the series. However, despite the high levels of craftship which both of the present studies attain, conceptual and methodoal differences between the studies limit possible comparisons.

ı *Jewish Americans: Three Generations in a Jewish Community*, Sidney stein and Calvin Goldscheider present some of the data from the Popun Survey of the Jewish Community of Greater Providence (1963), thus osely limiting their universe to the Jewish community of Greater idence in the interests of replication and quantitative rigor. Basing exploration of Jewish assimilation on changes across three generations, ıuthors seek, "to explore changes in the structure of an American Jewish nunity which reflect the emerging balance between separation and loss wish identity, between Jewishness and Americanism, and, in turn ben Jewish survival and total absorption." Chapters on changing demohic and social class profiles, and on mortality and fertility document , of the important trends in the Jewish adaptation to metropolitan rica. Discussed with richness of detail are the movement to the suburbs h increases over three generations, the higher concentrations of Jewish ricans in professional and managerial occupations, and the relationship een between high levels of educational attainment and generation in rica. Data on intermarriage and conversion presented in a chapter on ubject show that net losses through heterogamy are negligible due to a ency toward conversion to Judaism which is especially prevalent ng non-Jewish wives of Jewish men. The authors find that this trend ases with distance from the immigrant generation and, contrary to pres findings, shows little association with education when generation and ıre controlled. In their chapters on religiosity, which they divide into ogical-ritualistic and organizational-cultural dimensions, the authors that despite the growing similarity in socioeconomic behavior between ewish population and the general population of Providence, the institus of Judaism retain a vitality which promises to maintain a structurally rentiated Jewish subsociety well into the future.

contrast to Goldstein and Goldscheider's original monograph, Alphoninkney's *Black Americans* is a well-executed short survey of the black 's career in this country. While he presents no new data, Pinkney dilily organizes a great deal of the literature in his chapters on "The Black munity," "Socioeconomic Status," "Social Institutions," and "Social ance." Inclusion of a chapter on 'Contributions to American Life," on historical background, and another on recent developments (includthe emergence of Black Power movements) makes this perhaps the up-to-date text on the subject now available for students and general ers. In his preface Pinkney states the point of view which he consistentplies to his material: "Life in a racist society for more than 350 years ed to the formation of a vast underclass of citizens in the United States, itained by differential access to rewards in all social institutions. The essed status of black people, then, is a direct result of social arrangets and practices. Therefore, the major emphasis of the present study een placed on an analysis of the forces in American society which have responsible for creating and maintaining the subordinate positions of people." Although they overlap in many instances, Pinkney's consis-

tent use of sociological explanation makes this volume an excellent companion to Pettigrew's more sociopsychological *A Profile of the Negro American.*

A general weakness of the series, including Milton Gordon's *Assimilation in American Life*, is the failure to relate patterns of "structural assimilation" to the structure of institutions in which these groups are embedded. For example, had Goldstein and Goldschieder gone beyond the usual six-category occupation profile, they might have been able to discover patterns of adaptation to the urban economy which help to explain why almost a quarter of the third generation remain in the older urban areas. We see evidence that a residentially differentiated Jewish community exists in Providence, but we never learn how it operates as a network within the larger urban society. Similarly, although Pinkney discusses Negro politics in some detail, we find little insight into the emerging relationships between the black population of the inner cities and the changing nature of urban politics. While neither study pretends to be exhaustive, these are subjects which deserve greater attention than they receive in the series to date.

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Reactions to Deviance: A Critical Assessment[1]

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A critical analysis is presented of that recent body of work which focuses attention on social reactions as key determinants of deviant behavior and deviance situations. The theme of process is identified as being central to this orientation. Major criticisms of the approach are considered, and several levels of analysis on which the reactions emphasis is useful are outlined. Brief consideration is given to some of the theoretical antecedents of the reactions orientation—leading to the conclusion that, at its heart, the approach simply develops, applies, and organizes some central themes of general sociological analysis as they relate to deviance and social control. While the approach probably does not constitute a causal theory in the strict sense of the term, its strong grounding in traditional sociological perspectives suggests that it has great promise in advancing theoretical integration in the area of deviance analysis.

INTRODUCTION

With the progressive development of genuinely sociological analyses of deviant behavior and social control (and the accompanying refusal to rely on uncritical psychobiological or "social welfare" explanations), a body of commonly accepted understandings about such phenomena has arisen (see Merton 1966; Cohen 1966), providing a background from which researchers of diverse "schools" or emphases can proceed. Thus, it is now widely recognized that the same social structures and value systems that give rise to socially approved conditions and behaviors give rise also to socially disapproved ones; the significance of the stratification order in this regard has been especially noted. Likewise, it is generally accepted that appraisals of behavior or conditions as socially problematic reflect the social positions, value structures, and rational interests of the appraisers. In short, deviance and control are seen to be integrally connected, both with each other and, through an extensive web of functional interrelationships, with various other elements of a sociocultural complex.

This body of understandings about deviance and control does not, however, preclude a variety of more specific theoretical emphases and methodological orientations. While some researchers continue to concentrate on the quite legitimate traditional question, Why does individual *A* engage in deviating behavior, when individual *B* does not? and to pursue (with increased sophistication) statistical comparisons between samples of deviating and nondeviating individuals, other investigators increasingly address them-

[1] An earlier version was presented at the University of Connecticut, Department of Sociology and Anthropology Colloquium, March 28, 1968. I am grateful to Howard S. Becker, Aaron V. Cicourel, Jack P. Gibbs, and Edwin M. Lemert for their thoughtful comments.

selves to somewhat different empirical questions about deviance and control, with respect to which alternative methodologies become appropriate.

In particular, it has been suggested recently that a "new deviance analysis" is being developed by certain American sociologists. Among the phrases used to describe this mode of analysis have been the "social reactions approach," "labeling theory," and the "interactionist" orientation (Gibbs 1966; Alvarez 1968; Rubington and Weinberg 1968). Writers often cited as representative of this "school" include (among others) Lemert (1951, 1967), Becker (1964), Kitsuse (1962), and Erikson (1962, 1966). Leaving aside for the moment the question of just how new (and how valuable from an explanatory standpoint) such orientation is, it can at least be recognized that this already influential body of work does have distinctive qualities that merit consideration. This paper attempts to specify the approach's central themes, to consider various criticisms that have been or might be leveled against it, and to assess its prospects for contributing to a systematic understanding of deviance and control. Also considered briefly are some theoretical antecedents of the "societal reactions" approach, as well as its relation to other major orientations.

BASIC THEMES

Very likely the single concept or theme most central to these writings is that of *process*. The societal reactions conception is preeminently a dynamic one. It insists that deviant behavior can be understood only in terms of constantly changing states reflecting complex interaction processes, that it is quite misleading to treat deviance as a static condition. It is more interested in the "social history" and ramifying effects of deviant behavior than in the basic "characteristics" of deviating acts or actors (as determined through degrees of association with standard sociological variables). Thus this approach constitutes a significant exception to what Cohen has termed the "assumption of discontinuity" in deviance studies. As he notes (1965, p. 9), until recently "the dominant bias in American sociology has been toward formulating theory in terms of variables that describe initial states, on the one hand, and outcomes, on the other, rather than in terms of processes whereby acts and complex structures of action are built, elaborated, and transformed."

While deviance analyses of the recent past largely lost sight of the importance of process, it is worth recalling that Edwin Sutherland (who in a sense fathered a good deal of the modern American sociology of deviance) clearly recognized its centrality. Thus he included, in his definition of criminology, knowledge concerning "the processes of making laws, of breaking laws, and of reacting toward the breaking of laws." He recognized that "these processes are three aspects of a somewhat unified sequence of interactions" and concluded that "this sequence of interactions is the object-matter of criminology" (1939, p. 1). A more specific application of this dynamic conception to empirical data was presented by Tannenbaum (1938) in his dis-

cussion of the "dramatization of evil," the process by which early stigmatization of youth played an important part in the development of delinquent and criminal careers.

A systematic elaboration of such processual analysis was provided by Lemert, who related deviance to processes of social differentiation and social definition. Lemert stated: "we start with the idea that persons and groups are differentiated in various ways, some of which result in social penalties, rejection, and segregation. These penalties and segregative reactions of society or the community are dynamic factors which increase, decrease, and condition the form which the initial differentiation or deviation takes" (1951, p. 22). And, likewise, he asserted: "The deviant person is one whose role, status, function, and self-definition are importantly shaped by how much deviation he engages in, by the degree of its social visibility, by the *particular* exposure he has to the societal reaction, and by the nature and strength of the societal reaction" (1951, p. 23).

Building on Lemert's earlier work, Becker has emphasized the theme of the deviance *label*, affixed through such processes of differentiation and definition. As he puts it, in what is now often taken as the central statement of the reactions orientation (1964, p. 9): "social groups create deviance by making the rules whose infraction constitutes deviance, and by applying those rules to particular people and labeling them as outsiders. From this point of view, deviance is *not* a quality of the act the person commits, but rather a consequence of the application by others of rules and sanctions to an offender. The deviant is one to whom that label has successfully been applied: deviant behavior is behavior that people so label." Becker further contrasts the dynamic nature of this conception with the static quality of much conventional deviance analysis, through the distinction between simultaneous and sequential models. As he notes (1964, p. 23), "all causes do not operate at the same time, and we need a model which takes into account the fact that patterns of behavior *develop* in orderly sequence." From this standpoint, the concepts of "career," "contingency," and "commitment" become extremely relevant; rather than seeing deviance as a condition that either exists or does not exist, we should look to the degree or extent of deviance and to the processes affecting the elaboration of this changeable and changing phenomenon.

These formulations by Lemert and Becker challenge us to rethink the issue of what should be the major focal points for research and analysis with respect to deviant behavior. To understand the social psychology of deviance, we must examine the ongoing processes of action and reaction, of response and counter-response, through which individual behavior and outlooks always develop. The self-conceptions of the deviating individual should be considered a crucial dependent variable, to which we should pay more attention than to the deviating behavior itself. "Transformations of identity" (Strauss 1962) become crucial, for personal identity is viewed not as a fixed object, but rather as a constantly changing, multifaceted emergent quality.

Becker cites, as a particularly salient contingency that shapes deviant

careers, "the experience of being caught and publicly labeled as a deviant" (1964, p. 31). Similarly, societal reactions analysts often draw on Harold Garfinkel's concept of "status degradation": "The work of the denunciation effects the recasting of the objective character of the perceived other: The other person becomes in the eyes of his condemners literally a different and new person. . . . the former identity stands as accidental; the new identity is the 'basic reality.' What he is now is what, 'after all,' he was all along" (1956, pp. 421–22). Although the reactions orientation clearly does stress official public labeling, it is concerned with unofficial response patterns as well. Official reactions are singled out merely as one (especially important) form of the overt and covert labeling processes that inhere in all social interaction. Deviance (like other human behavior) is shaped by various combinations of public and not-so-public interaction processes. Likewise, it is implicit in this orientation that "positive" labeling (which helps to insulate the individual from commitment to deviant roles), as well as "negative" labeling, must be examined. The important point emphasized in this approach is simply that identities are always in flux, that statuses may be conferred and withheld, that deviance is to a considerable extent an ascribed status. It reflects "what other people do" as much as what the deviating actor himself does.

If our major research interest is not in the social psychology of individual deviation, but rather in an analysis at the societal level of particular deviance problem situations, we are again directed to social reaction processes. Here we must explore systematic patterns of collective response to particular kinds of behavior, within and between societies; we are drawn back to Becker's observation that "social groups create deviance by making the rules." These collective response patterns have been less researched than the interpersonal reaction processes influencing individual deviant careers, but at least some analyses of rule making at the societal level have been essayed. Sutherland's classic study of sexual psychopath laws (1950) is an early illustration of such work; and Becker, in his discussion of the "natural history" of rule enforcement (1964, chaps. 7, 8) also makes an exploratory attempt in this direction. Similarly, Erikson, in *Wayward Puritans* (1966), throws new light on the broader reaction patterns.

In an early critique of the labeling approach, Gibbs asserted (1966, p. 12) that while a theory about *reactions* to deviance (even more than a theory about deviance per se) seems to be what is sought by such analysts as Becker, they have in fact provided no means of explaining "why a given act is considered deviant and/or criminal in some but not all societies." "After all," Gibbs goes on to state, "a certain kind of reaction may identify behavior as deviant, but it obviously does not explain why the behavior is deviant." This criticism seems overstated. Even if no sociologist has produced a full-fledged systematic theory explaining variations in societal definitions of behavior as deviant, at least there have been useful first steps toward that goal—such as the studies just cited. Furthermore, it is significant that the societal reactions approach—almost alone among the current orientations to deviance—does clearly identify this issue as one of the most

important questions for empirical research in the field. Comparative and historical analyses have great potential value in this regard, as do other efforts to explicate the relationships between general value systems and rules that define deviance. Recently, investigations of public attitudes toward (and knowledge of) various forms of behavior which are sometimes labeled deviant (Simmons 1965; Rooney and Gibbons 1966) have also produced data relevant to an understanding of the cultural contexts out of which deviance-defining rules emerge.

The reactions orientation also calls attention to the impact that is made on society by defining behavior as deviant. Recent contributions by Erikson (1962) and Coser (1962), drawing on such classic theorists as Durkheim and Simmel, develop one side of this analysis. As they stress, the "establishment" of deviance is crucial in promoting social cohesion and serves as a boundary-maintaining device. Deviance defining is seen, then, not merely as a process affecting social structure but, in a sense, almost as a functional prerequisite of such structure. It is from this standpoint that one appreciates the impossibility of completely eliminating deviance, although certainly it may be possible to develop functional alternatives to some of its forms.

There are other consequences of defining behavior as deviant, consequences that exist on a level somewhat intermediate between these broad functional aspects and the level of individual self-conceptions and career. An example would be the economic consequences of "criminalizing" certain forms of deviating behavior, as seen in situations where society's restrictive formal reaction serves to promote a black market, to place the illegal dealer or practitioner in something akin to a monopolistic position (Packer 1964; Schelling 1967). Related consequences include a broad spectrum of other secondary deviation that may arise when society treats behavior as deviant or criminal (as in the "crimes without victims" area). (Schur 1965; Packer 1968). Various effects on the behavior of social control agents may also result, as shown, for example, in recent studies of the police (Skolnick 1966; Bordua 1967; Wilson 1968).

Whatever level of deviance-related interaction is given attention, the societal reactions approach insists that the analysis will be most productive if it concentrates on the control side of the deviance-and-control cycle. As Erikson (1962, p. 308) points out, "Deviance is not a property *inherent* in certain forms of behavior; it is a property *conferred upon* these forms by the audiences which directly or indirectly witness them. Sociologically, then, the critical variable is the social *audience* . . . since it is the audience which eventually decides whether or not any given action or actions will become a visible case of deviation." The meaning of "audience" here is twofold. In one sense, as we have just seen, society at large constitutes the audience. But on another level the more specific agents of control are the critical audience, for they implement these definitions in ongoing social action and through institutionalized procedures. They are among the most significant of the *direct* reactors and labelers. Their actions constitute an important part of what Erikson calls the "community screen" (1962, p. 308), the

filtering processes through which certain individual members of society are selected out for designation as deviant.

With the new emphasis on societal reactions we should continue to see research increasingly focused directly on these filtering processes. This focus may also lead to a reassessment of certain common methodological assumptions, such as that of the unrealiability of official statistics. Thus Kitsuse and Cicourel (1963), in line with a call for studying "the processes by which rates of deviant behavior are produced," argue that official rate figures should be treated as dependent variables. They state further (1963, pp. 136–37): "To reject these statistics as 'unreliable' because they fail to record the 'actual' rate of deviant behavior assumes that certain behavior is deviant independent of social actions which define it as deviant. . . . rates must be explained in terms of the deviant-processing activities of organizations. Thus, rates can be viewed as indices of organizational processes rather than as indices of the incidence of certain forms of behavior." Yet this very matter of explaining rates is singled out by Gibbs as a basis for criticizing the societal reactions orientation. He claims that the reactions analysts fail to explain variations in the incidence of deviant acts as between different populations, and he goes on to ask (1966, p. 12):

> are we to conclude that the incidence of a given act is in fact a constant in all populations and that the only difference is in the quality of reactions to the act? Specifically, given two populations with the same kind of reaction to a particular act, can the new perspective explain why the incidence of the act is greater in one population than in the other? Not at all! On the contrary, even if two populations have the same legal and social definition of armed robbery and even if instances of the crime are reacted to in exactly the same way, it is still possible for the armed robbery rate to be much higher in one population than in the other.

Even though one could insist that reactions to particular forms of behavior are never exactly the same in two populations, Gibbs's criticism on this point seems to have some merit. In focusing on the part that reaction processes play in producing deviant "outcomes," the orientation may indeed (relatively) neglect patterned variations in structural strain and other socioeconomic conditions that at least in part generate the behavior toward which the reactions initially are directed. However, as we shall see below, these two approaches are far from being mutually exclusive. And it is at least important to recognize that official data may be a useful source of information about organizational decisions and processing activities. Actually it seems impossible to specify definitively the relative "contributions" of deviating behavior and processing behavior to official data indicating deviance "rates." (Self-reported behavior studies have surmounted some of the sampling problems relating to official statistics, but relying on that approach will not guarantee that due attention is paid to the processes by which officials select out particular deviating acts and individuals for public recognition and disposition.)

Nor is it really the case that the societal reactions approach attributes all deviance outcomes (and rates) only to processing variations. Erikson seems close to such an assertion when he writes that "the amount of deviation a community encounters is apt to remain fairly constant over time,"

and likewise that "social groups are likely to experience a relatively stable 'quota' of deviation, partly because their social control machinery is calibrated to handle a steady flow of deviant conduct and partly because a group's definition of deviant behavior is usually phrased in such a way as to embrace a given segment of its range of experience" (1966, pp. 23, 163–64). Yet in general it is more characteristic of the reactions perspective merely to emphasize the relative importance of processing, and perhaps to view labeling as a necessary feature of the sequence leading to at least some kinds of deviance rather than as a necessary and sufficient condition.

GENERAL CRITICISMS

The preceding comments point to three general lines of criticism that have been directed against the reactions conception of deviance. The first charges that the approach is, in Gibbs's words, "relativistic in the extreme" because (he asserts) it depicts "the essential feature" of deviants and deviant acts as being "external to the actor and the act" (1966, p. 11). Thus reactions analysts are seen as denying the reality of deviance, whereas (according to Gibbs) we all know that deviance is quite real regardless of the specific manner in which we react to it. While the reactions approach does indeed require "that the sociologist view as problematic what he generally assumes as given—namely that forms of behavior are *per se* deviant" (Kitsuse 1962, p. 248), this is hardly an assertion that deviating behavior does not actually occur. None of the reactions theorists would maintain that the acts we commonly label homicide, stealing, homosexuality, and mental disturbance would never occur if they were not defined as "deviant." Rather, these theorists are insisting that since these behaviors inevitably are defined and reacted to in various specific ways in a given social order, it is meaningless to try to understand the behaviors without taking such definitions and reactions into account. It is not so much the existence of the behavior as it is the nature, distribution, social meaning, and implications of the behavior that cannot be explained without consideration of reaction processes. What is made of an act socially—indeed, one could say its very "reality"—is crucially dependent on, or constituted of, the diverse social constructions individuals and groups place upon it. (See, for example, Cicourel 1968.)

A related line of criticism points to a haziness in the specification of just what is and what is not deviant. Here the reactions theorists are criticized basically because they cannot say about a process the sorts of things one can say about a static condition. Thus Gibbs claims that they do not make clear what kind of reaction, or how much reaction, is necessary for us to say that an act or an individual is deviant. Yet the processual orientation suggests that there is no single identifiable point at which an act or individual "becomes" deviant. It is true that we may wish to recognize (even concentrate on) the "full-fledged deviant," who has experienced an extensive elaboration of "secondary deviation" and whose self-conceptions and acts substantially sustain the image others have of him as deviant (Lemert 1967, pp. 40–64). And we may agree that in the transformations of identity that shape indi-

vidual "moral careers" there may be special "turning points," perhaps even points of no return (Strauss 1962). But, generally, this approach does not seem to demand that we should be able to categorize individuals clearly as being either "deviant" or "nondeviant."

On the contrary, acts that may be construed as deviant constitute only one segment of an individual's behavior. Furthermore, there is a very broad continuum of degrees of commitment to (and resistance to) "deviant" roles, and such commitments are constantly changing. Hence, our characterizations of deviating individuals must always be in terms of degree, variation, circumstance, rather than through simplistic "either/or" statements. The same is true of the characterization of forms of behavior as being "deviant" or "nondeviant." Gibbs (1966, p. 13) charges that, if the labeling theorists want to be consistent, they "would have to insist that behavior which is contrary to a norm is not deviant unless it is discovered and there is a particular kind of reaction to it. Thus, if persons engage in adultery but their act is not discovered and reacted to in a certain way . . . then it is not deviant! Similarly, if a person is erroneously thought to have engaged in a certain form of behavior and is reacted to "harshly" as a consequence, a deviant act has taken place!" Here again Gibbs simply fails to distinguish between mere physical acts and the meaningful constructions that constitute social reality. It is not at all ridiculous to assert that "mistakes" concerning the occurrence of deviating behavior are likely to have highly meaningful social consequences. But such effects will not be appreciated if one persists in believing that "deviance" somehow has an objective reality apart from the socially organized conceptions that define it. Ironically, it is precisely because of such socially patterned conceptions that Gibbs can feel such certainty as to which acts are, and which are not, "deviant."[2]

Because of its lack of clear definitions and its failure to answer certain major questions (such as those already alluded to), and because it does not consist of or clearly indicate a set of interrelated propositions and testable hypotheses, it may be charged that the reactions analysis does not, strictly speaking, constitute a theory. Gibbs insists that it is simply a "conception," and in the present paper the terms "theory," "conception," "orientation," "perspective," and "approach" have been used more or less interchangeably. Clearly it is correct to point out that the reactions analysts are not much concerned to develop, by determining patterns of association between standard variables, the traditional kinds of predictive statements about the etiology of deviance among specified classes of individuals.

As an effort at causal explanation of deviance, the reactions approach probably finds more congenial the universal ("analytic induction") conception of cause (see Robinson 1951; Turner 1953) suggested by Znaniecki and adopted in deviance studies by Lindesmith, Cressey, and to some extent Sutherland. Such an explanation, seeking to cover *all* cases of the phenomenon to be explained, necessarily becomes extremely broad and, as a critic has noted (Turner 1953, p. 609), tends to have the quality of a closed causal

[2] I am grateful to Aaron Cicourel for suggesting this point.

system through which prediction is not possible. In essence, it describes social processes that are found along with (or, more specifically, occur antecedent to) every instance of the behavior in question. It specifies necessary, but not necessary and sufficient, conditions of the behavior. This model seems appropriately applied to the reactions approach. All deviance involves *some* process of societal reaction; an individual or an act is not deviant unless so defined. Yet by itself the societal reaction is not sufficient as an explanation of all deviation.

At the broadest levels of societal definition, reaction clearly is a necessary condition of socially recognized deviance. Rule violation presupposes the formulation and substantial legitimation of specific rules. Social systems "produce" the content of norms through emerging assessments of and collective reactions to various kinds of behavior. When we turn to the social psychology of individual deviation and deviant careers, if we again define reaction process broadly enough, it can be seen as a necessary condition of the behavioral outcomes. Thus if we say that all social interaction inevitably involves subtle and intricate "labeling" processes (which in various combinations and sequences determine the individual's patterns of conformity to and deviation from particular norms), then we must recognize that one cannot understand an individual's deviation without considering the "labeling" that has led up to it. To be sure, this is not saying much more than that a person's "social history" must in some way be relevant to his present behavior; yet in some of the more static analyses of deviant behavior even this broad conception of "labeling" has often been ignored.

Of course, the reactions analysts are also emphasizing a more specific aspect of "labeling" by focusing on the potentially cumulative impact of successive negative reactions in the shaping of individual deviant careers. With respect to labeling in this narrower sense, the situation is more complicated, since we can conceive of cases of even prolonged involvement in deviating behavior in which the deviator does not experience direct or official negative reactions (as, for example, where his deviation goes unrecognized). However, in such cases indirect and unofficial negative labeling, or the mere knowledge of potential negative evaluations of his acts, may still influence the actor's behavior and his self-conceptions.

More significantly, some such negative labeling probably is a necessary condition for his behavior to acquire those special qualities we usually have in mind when we use the term "deviant career." At the very least we can say that whenever the actor does experience (or is aware of actual or potential) negative responses, the meanings he himself attaches to the behavior will undergo modification. Likewise, the reactions approach does not rest or fall on an assertion of negative response as a necessary condition of engaging in any *single* deviating act. Sometimes this will, in effect, happen—as when the "initial" act of deviation appears to represent a behavioral "compliance" with the prior expectations of significant others. Yet a merit of the processual orientation is to stress that the very act of establishing such cutoff points (as that marking the "initial" deviation) is itself an act of interpretation. Human behavior is better viewed in dynamic terms, ever

changing and constantly subject to diverse and socially constructed meanings.

RELATION TO OTHER THEORIES

In order to consider briefly the approach's theoretical antecedents and its relation to other orientations currently applied to deviance, it may be useful to identify three interwoven theoretical strands that appear to be present within it. Without doubt the most significant of these derives from the "symbolic interactionist" tradition of the Chicago school, for the approach is heavily grounded in the interactionist social psychology developed by such writers as Cooley, Mead, and Thomas. The emphasis on process and sequential analysis, the focus on self-conceptions, and even the concepts relating to "career," all are drawn more or less directly from the work of this school. Indeed, the central notion that the societal reaction "produces" deviance is, in a way, simply a reworking of Thomas's well-known dictum that "if men define situations as real, they are real in their consequences."

A closely related but perhaps nonetheless distinctive strand might be termed "microsociological-phenomenological," seen particularly in the work of Erving Goffman and Harold Garfinkel. Although Goffman's work clearly is in the Chicago tradition, he has, to some extent, conveyed in his analyses (see esp. 1959, 1961, 1963) a particular cast or stamp which is being reflected in some of the studies of labeling theorists. His work has, for one thing, nicely related the general perspectives of the Chicago interactionist tradition to the analysis of social control agencies, as in his concept of "total institution." And, perhaps more crucially, his insightful studies have been instrumental in according renewed legitimacy to radical observation and description as a research technique (a matter which again ties in very closely with the Chicago sociologists, in particular with concepts such as the "conversation of gestures"). Garfinkel's work (1952, 1967)—especially to the extent that he draws on the attempted synthesis of sociology and phenomenology of Schutz (1967)—also develops important perspectives useful to the reactions analyst. A key emphasis here is on seeking to understand behavior as it is understood by the actors themselves. Also significant is the concept of typification; its usefulness in specific deviance studies is suggested by Sudnow's investigation of a public defender's office (1965), Piliavin and Briar's study of police encounters with juveniles (1964), and Cicourel's analysis of the processing of delinquents (1968). Again, a major emphasis and contribution of the phenomenologically oriented sociologists is methodological in nature. Thus Garfinkel has, for example, attempted to develop operational procedures for getting beneath the surface of things, beyond that which is taken for granted in everyday life (and, hence, at the same time coming to realize just what *is* taken for granted in ordinary interaction). In a sense, methodology and substantive theory seem almost to merge in this approach's central concern for the analysis of meaning contexts and experience structures and of the operations of sociological research itself. Unfortunately, it is not possible in this brief paper to explore in great-

er depth the uniqueness and value of "ethnomethodology" as a style of work in sociology.

A third major theoretical strand which seems to be present represents a fusion of, or at least contains elements of, functionalism and conflict theory. When the functionalist component in the societal reactions approach, as developed, for example, by Erikson and Coser, is seen in conjunction with the notion (emphasized by Becker) that rule making is essentially a political activity, the close relation between functionalist and conflict orientations in this analysis becomes evident. Similarly, when we consider economic functions of deviance, we can hardly avoid taking something of a "conflict" approach. In this connection, we might note that Marx (who was something of a functionalist as well as a conflict theorist) described the criminal as supporting the entire apparatus of police and criminal justice and also the criminal law professor who even sells his lectures as a market commodity. Marx stated further: "Crime takes off the labour market a portion of the excess population, diminishes competition among workers, and to a certain extent stops wages from falling below the minimum, while the war against crime absorbs another part of the same population. The criminal therefore appears as one of those natural 'equilibrating forces' which establish a just balance and open up a whole perspective of 'useful' occupations" (Bottomore and Rubel 1956, pp. 158–59). A similar point was made in a classic criminological critique of the conventional notion of the "costs of crime" (Hawkins and Waller 1936), and also by Merton in his assertion (1957, p. 79) that, from an economic standpoint, provision of legal and provision of illegal goods and services are to a great extent functional equivalents. At any rate, it may be noted that some individuals gain through the persistence of deviance; this is a factor that must be considered in any analysis of societal reactions. Likewise, the making and enforcement of rules defining deviance contains a power dimension and both reflects and gives rise to rational economic (or other) interests.

At the very least it seems, then, that the societal reactions orientation contains elements that are consistent with certain formulations of both functionalist and conflict theory. The approach is also consistent with various other theoretical orientations that have been specifically applied to deviant behavior. Cohen has usefully attempted to relate the reactions perspective to anomie theory and associated conceptions (such as "opportunity theory"); he suggests in part that whereas some deviance may be attributable to a disjunction between goals and means, other deviance may be more directly expressive of roles, in which case the behavior "may have the primary function of affirming, in the language of gesture and deed, that one is a certain kind of person" (1965, p. 13). On the other hand, as Cohen himself notes, it is possible that such explanations of deviance are far from being mutually exclusive. At least for the analysis of certain kinds of individual deviant careers, it may be useful to consider the societal reaction a key and perhaps necessary *intervening* process—one for which structural conditions and sociocultural disjunctions and strains set the stage, and through which deviant outcomes (and to some extent the general sociocultural setting it-

self) are shaped. Thus while opportunity structures may largely determir for specific populations the probable rates of entry (or "categoric risks" (entry) into certain institutionalized labeling processes, these processes i turn clearly restrict the opportunities of those specific individuals again whom they are directed.

Likewise, if we look at Scheff's interactionist formulation of mental il ness as an example of a "reactions theory," we can again see meaningf ties to more conventional approaches. Scheff writes (of the "crisis occurrin when a residual rule-breaker is publicly labeled") that "when gross rul breaking is publicly recognized and made an issue, the rule-breaker may b profoundly confused, anxious, and ashamed. In this crisis it seems reason able to assume that the rule-breaker will be suggestible to the cues that l gets from the reactions of others toward him" (1966, p. 88). Since the ou come, in this formulation, depends so crucially on the degree and nature (the individual's suggestibility to such cues, and since that in turn must de rive from his prior social history (including his location in particular soci structures), it follows that the explanation is quite consistent with (an probably even to some extent requires reference to) conventional formula tions about the role of cultural and structural variables in generating strai conducive to deviance.[8]

CONCLUSION

The societal reactions approach should not be judged primarily in terms (whether it is, technically speaking, a self-contained theory, but rather i terms of the probable impact it will have on our overall understanding o deviance and social control. Its main contribution lies in its partial redirec tion of analysis to certain key objects of research, in the focus it places o understanding the dynamics of deviance, on studying specific reactio agencies and labelers, and on analyzing broad patterns of deviance definin Another contribution is to bring to the fore some important questions (to b explored in a later paper) concerning images of the deviating individual a human actor, with special reference to such concepts as will, determinism and responsibility (see Matza 1964; Stoll 1968). Also intriguing, and deserv ing of further analysis, are the public policy stance and implications of th body of work (Gouldner 1968).

Because the societal reactions orientation is firmly grounded in many traditional sociological perspectives, we cannot really say that it is going to revolutionize our outlook on deviance. At the same time, and perhaps large ly because of this very grounding, the likelihood that it will contribute sig nificantly to the integration of theory in the area of deviance and control is strong indeed.

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[8] I am grateful to Alan M. Orenstein for suggesting this example.

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A Sociolinguistic Census of a Bilingual Neighborhood[1]

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An intensive language census in a bilingual Puerto Rican neighborhood in Jersey City was found to yield reliable data, particularly for items dealing with demographic variables and literacy questions. The language questions yielded *R*-factors which showed institutional separation (home, work, religion) as well as performance separation (speaking, reading-writing). Claiming patterns yielded *Q*-factors which differentiated between socially less and socially more mobile and accomplished adults, between outwardly and inwardly oriented youngsters, and between all the foregoing groups and housewives and their minor children. Analyses of variance of factor scores pertaining to Spanish literacy, oral Spanish, and English (oral and literate) indicated that age, birthplace, generational range of household, and occupation of head of household tended to be significant main effects in each instance. However, their incremental and cumulative value, and also that of the interaction between age and generational range, varied greatly from one factor to the next.

Language censuses have traditionally been criticized for their low reliability and their unproven validity (see Kloss 1929). More recently they have also been criticized for their lack of sociological contextualization (Appendix, "U.S. Census Data on Mother Tongue," in Fishman 1966; Lieberson 1966 and, particularly, 1969). Most language censuses have asked too few questions as well as questions that did not seek to determine the functional allocation of the languages available to populations marked by widespread and relatively stable bilingualism. In such populations it is the *societal role* of L_1 and L_2 (mother tongue and other tongue) that is of greatest significance, rather than the mere aggregation of individual data concerning differential frequency or capacity of use in an overall uncontextualized sense.

The census here reported represents an attempt to utilize sociolinguistic theory in the measurement and description of bilingualism in a two-block Puerto Rican neighborhood in Jersey City, New Jersey. In addition to obtaining census data on virtually the entire population of these two blocks, various psychological, linguistic, and other sociological measures of bilingualism were also applied to samples of this population. The intercorrelations among these several measures—most of which required active lan-

[1] The research reported in this paper was financed by the language research section, Department of Health, Education, and Welfare (contract no. OEC-1-7-062817-0297). Data processing in connection with this research was supported by a grant from the College Entrance Examination Board. Preparation of the paper was facilitated by the Institute of Advanced Projects, East-West Center, University of Hawaii, where the author was a senior specialist during the 1968–69 academic year.

guage use—will be separately examined to provide some indications as the validity of the census "self-reports" obtained (Fishman and Coo 1969; Fishman and Terry 1969).[2] This paper seeks to explore whet detailed sociolinguistic data can be obtained from a population of qu humble attainment via census methods and whether such data are relia and meaningful upon analysis.

SELECTED DEMOGRAPHIC CHARACTERISTICS

Ninety Puerto Rican households were identified with the aid of long-te local residents in the neighborhood selected for study. Eighty-six hou holds cooperated with the census takers;[3] they contained 431 individu The remaining four households were estimated to comprise eight more dividuals. Table 1 reveals the distributions obtained for the study popu tion on eight examined demographic variables and the agreement of sponse for each variable upon requestioning 20 percent of all househo one month later.[4]

The demographic characteristics of the studied population (table 1) se to be quite similar to those of Puerto Ricans in the Greater New York C area as a whole (U.S. Bureau of the Census 1962; Kantrowitz and Pappe fort 1966; Kogan and Wantman 1968): predominantly young; large American born or born in smaller towns in Puerto Rico; predominantly u skilled workers; mostly of little formal education; mostly of low occu tional status; etc. The census-recensus agreements on such items are i variably high. However, the study neighborhood was selected not becau of its representativeness vis-à-vis any larger population, but rather becau its size, stability, and anticipated cooperativeness were all such as to ma detailed sociolinguistic study possible.

DESIGN OF LANGUAGE QUESTIONS

The language questions followed the recommendations of the 1964 SSR Sociolinguistics Seminar at Indiana University (reported in Lieberson 1966 These questions deal separately with understanding, speaking, readi and writing. Each of these "performances" is separately reviewed in thr

[2] In general, census replies by heads of households not only correlated highly with in pendent psychological and linguistic measures of bilingual usage but were the best pr dictors of independent criterion ratings of understanding, speaking, and reading Spani and English (Fishman and Cooper 1969).

[3] In seeking the cooperation of local residents, census takers explained that the purpo of the census was to obtain information needed in order to help teachers improve instru tion of English and Spanish for students studying either or both these languages. In add tion, a letter of introduction from a local Roman Catholic priest (in Spanish) and Spanish newspaper account of our project were also included in each census taker's k although these were rarely needed.

[4] Households were defined as including all individuals who claimed to reside in the sar apartment. A single respondent, normally the head of household or senior adult presei was asked to reply for the entire household. All census takers spoke both English ar Spanish with native fluency.

ways: developmentally (e.g., "In which language did you speak conversationally *first?*"), currently ("Can you now hold a conversation in ______?"), and in terms of relative frequency ("What language do you most frequently use for conversations?"). In addition, most performances are separately reviewed in the context of home use, work use, and religious use. Finally, a single educational-instruction item and a single language-preference item are included. No self-ratings of adequacy or competence were requested in view of the suspected low validity and directional bias of replies to such

TABLE 1

DEMOGRAPHIC DESCRIPTION OF RESPONDENTS

Variable	Distribution	Recensus
Sex	Male: 50.6%; female: 49.4%	98%
Age	Under 6: 28.3%; 7-12: 21.6%; 13-18: 11.1%; 19-24: 9.0%; 25-34: 14.8%; 35-44: 9.5%; 45-54: 4 2%; 55-64: 1.4%; 65 or over: none	95%
Birthplace	United States: 42.2%; San Juan or some section thereof: 9.5%; Puerto Rican cities of 10,000 or larger: 13.9%; smaller Puerto Rican towns or rural areas: 33.1%; no response or unknown: 1.2%	97%
Occupation	Operative, service worker, laborer, welfare: 20.4%; craftsman, foreman or blue collar: 6.5%; self-employed, white collar (secretary, salesman), subprofessional: 2 5%; professional, manager, college student: 1.2%; housewife: 10.2%; minors (age 18 and below, unless working *and* not in school): 59.2%; no response or unknown: none	88%
Education	None: 1.4%; elementary (1-6): 32.5%; secondary (7-12): 32.5%; college: 1.2%; graduate school: none; no response, unknown or below school age: 32.5%	84%
Years in United States	Less than 1: 3.9%; 1-2: 5.3%; 3-5: 7.9%; 6-10: 16.9%; 11-20; 20.2%; 20 and over: 2.1%; U.S. born: 42.2%; no response or unknown: 1.5%	90%
Years in Jersey City	Less than 1: 16.5%; 1-2: 20.9%; 3-5: 19.3%; 6-10: 31.1%; 11-20: 10.4%; 20 and over: .2%; no response or unknown: 1.6%	93%
Years at present address	Less than 1: 54.3%; 1-2: 29.2%; 3-5: 12.5%; 6-10: 3.0%; 11-20: .9%; 20 and over: none; no response or unknown: none.	84%

questions by linguistically untrained and socially insecure individuals. However, when such self-ratings were volunteered they were accepted, provided they corresponded to qualifications of "yes" or "no" on questions of current performance.

RESULTS

Marginals

Table 2 reveals the replies obtained to the twenty-three language items that constituted the census schedule.[5] The general picture derived from these

[5] The NP column also includes those individuals for whom household respondents indicated that a particular question was "not pertinent." Thus, questions concerning under-

replies is of a speech community in which oral Spanish is widely claimed t be the first language learned (items 9 and 10) and where it remains th predominant language of face-to-face interaction, not only at home (iter 13) but at work (item 16) and in church (items 21, 22, 23) as well. Or English is most frequently claimed in association with conversational pre erence (item 20), school instruction (item 19), and church or religious us (items 21, 22, 23), but in none of these contexts is it claimed nearly as fre quently as Spanish.

TABLE 2

REPLIES TO LANGUAGE-CENSUS ITEMS

Item	Yes	Little	No	NP*	
1. Can understand Spanish conversation?.....	779	135	019	067	8
2. Can speak Spanish (conversation)?........	833	077	016	074	8
3. Can read newspapers/books in Spanish?....	397	049	318	237	8
4. Can write letters in Spanish?............	390	030	339	241	8
5. Can understand English conversation?.....	571	176	183	070	8
6. Can speak English (conversation)?........	536	181	216	067	8
7. Can read newspapers/books in English?....	455	130	206	209	8
8. Can write letters in English?............	387	063	327	223	8
	Spanish	English	Both		
9. First language understood (conversation)?...	886	002	039	072	5
10. First language spoken (conversation)?......	884	...	023	093	5
11. First language read (newspapers/books)?...	401	...	297	302	9.
12. First language written (letters)?..........	383	002	276	339	9
13. Most frequently spoken at home?.........	657	088	183	072	5
14. Most frequently read at home?...........	267	051	357	325	8
15. Most frequently written at home?.........	339	014	255	392	9
16. Most frequently spoken with fellow workers?	137	049	137	677	8
17. Most frequently spoken with supervisor?...	046	009	264	680	5
18. Most frequently spoken with clients/customers..................................	032	014	035	919	7
19. Language of instruction in school?.........	339	237	167	257	7
20. Language liked most (conversation)?.......	362	285	186	167	6
21. Language of priest's/minister's sermon?....	452	137	193	206	4
22. Language of silent prayer?................	469	123	151	257	7
23. Language of church service?..............	427	160	193	220	4

NOTE.—Percentages based on marginals; $N = 431$. Percentages carried to three places, decimals omitted.

*NP = not pertinent.

With respect to literacy the picture is somewhat different. As abilities ("can . . ."), English and Spanish literacy are claimed with almost equal frequency (items 3, 4 and 7, 8). This is because Spanish literacy is claimed for less than half of those for whom oral Spanish competence is claimed,

standing and speaking in the case of infants, questions about reading and writing for preschoolers or illiterates, questions relating to work for housewives or those usually unemployed, questions involving church attendance for nonchurchgoers, elicited responses which were coded as NP. Nonresponse or "don't know" responses to particular items were extremely uncommon.

whereas the discrepancy between claimed oral competence and claimed literacy is far less for English. Spanish literacy alone is more widely claimed than English literacy alone (items 14 and 15), and is most frequently claimed prior to English literacy (items 11 and 12). Nevertheless, the proportions claiming simultaneous literacy in English and in Spanish are very high. Indeed, reading both English and Spanish "most frequently" at home (item 14) is claimed more often than is reading Spanish alone "most frequently" at home.

All in all, Spanish is most claimed in association with home and with oral use, whether viewed developmentally, currently, or in terms of relative frequency. English, on the other hand, while it has not displaced the primacy of Spanish in any way, is itself most claimed in association with current literacy in the home and with school (and to a lesser degree also religious) use. The high rate of claimed biliteracy may also be taken as a sign of the lack of an oral-literate distinction for English claims such as exists for Spanish claims.

TABLE 3

FACTORS AND ITEM LOADINGS DERIVED FROM LANGUAGE-CENSUS DATA

No	Suggested Factor Name	Items (Loadings)
I	Spanish: literacy	4(93), 3(92), 15(89), 12(88), 11(87), 19(71), 14(70), 20(54)
II ...	English (oral and written)	7(89), 6(88), 5(84), 8(82)
III....	Spanish: oral	9(78), 1(71), 2(66), 10(63), 13(38)
IV . .	Spanish: at work.......	18(79), 16(73), 17(55)
V. ...	Spanish: in religion.....	21(93), 23(89), 22(40)

The census-recensus item correlations[6] shown in table 2 indicate, by and large, a quite acceptable level of reliability. The correlations are lowest for first language understood, for language most frequently spoken at home and with supervisor, for language liked most, and for language of church sermon and service. Literacy items and capacity items ("can [you] . . .") reveal the highest census-recensus reliability. The median census-recensus item correlation is 0.81. Examination of changes in response from census to recensus most frequently indicates a shift to more responses claiming Spanish or both languages.[7]

R-Factors

A varimax orthogonal rotation solution to the intercorrelations between all items listed in table 2 yielded the five factors shown in table 3.

[6] Census-recensus item correlations (Pearsonian) were computed based upon the following scores: for items 1–8, yes = 3, a little = 2, no = 1, not pertinent = 0; for items 9–23, Spanish = 3, both = 2, English = 1, not pertinent = 0. The Pearson product-moment correlation between the overall item means obtained on the basis of the above scores for the census-recensus population is 0.97.

[7] The direction of this shift may be in accord with greater awareness that our project represented a genuine interest in both languages rather than in English alone, as might have been initially suspected.

From the viewpoint of macrosociolinguistic theory, which focuses on social institutions and functions rather than on face to face social processes, one would expect factors derived from bilingual scores to be closely related to the major societal institutions (family, school, work, religion, etc.) in any society marked by relatively stable and widespread bilingualism (Fishman 1965*a*, 1969*a*, 1969*b*). However, the functional differentiation of codes which marks such societies must cope not only with the major societal institutions or domains but also with the differentiation between oral and written use of language. Diglossic societies—that is, societies marked not so much by individual bilingualism for intergroup purposes as by societal bilingualism for intragroup purposes—have commonly been found to reserve only one of the varieties of languages constituting their code matrix for written use and for the greater formality of legal, governmental, religious, and educational uses with which literacy is associated (Mak 1935; Barker 1947; Ferguson 1959; Gumperz 1964; Fishman 1967; Rubin 1968, Weinreich 1959). Factor analysis is one technique—previously unutilized in analyzing language censuses[8]—that can enable us to discover the functional interrelation between the oral-literate differentiation on the one hand and the institutional differentiation on the other.

Table 3 reveals the very interrelation between literacy and social institutions which recent sociolinguistic theory has led us to expect. The first three factors pertain primarily to the home domain, the fourth to work, and the fifth to religion. The predominant role of Spanish in the community under study is indicated by the number and diversity of the Spanish factors. English is still largely undifferentiated. Oral English and written English tend to be claimed for the same individuals. Claiming of English is relatively unpredictable from claims for Spanish literacy or from claims for any other Spanish factor. English and Spanish are not claimed at each other's expense; they are separately rather than displacively claimed.

Spanish itself is functionally differentiated. Claims for oral use of Spanish (Factor III) are quite separate from and not predictive of claims for literate use of Spanish (Factor I). Similarly, claims for use of Spanish in religion (Factor V) are quite separate from and not predictive of claims for use of Spanish at work (Factor IV). As might be expected under these circumstances, instructional (school) experience with Spanish (item 19) is imbedded in more general Spanish literacy. Less expected, perhaps, is the fact that preferential use of Spanish for conversations (item 20) is also re-

[8] Most other language census studies have had to utilize data obtained from two or, at most, three language-capacity or language-use questions. As a result of the severely limited number of questions typically devoted to language in censuses that serve more general purposes, factor analysis of the resulting language data has heretofore not been feasible. Given the growing interest in more exhaustive language censuses and language surveys, data-compositing techniques such as factor analysis may well become more widely used in the near future. For discussions of plans for intensive and extensive language censuses and language surveys, see successive issues of *Bulletin of the Survey of Language Use and Language Teaching in East Africa* (Nairobi, Kenya), which reports on language surveys in five countries of East Africa as well as elsewhere, particularly in South and Southeast Asia.

lated to Spanish literacy rather than to oral Spanish. This may indicate that those individuals who become ideologized with respect to language—that is, those who become "language loyalists" and for whom Spanish symbolizes Puerto Rican group identity rather than being merely a natural ingredient of everyday life—are also those who tend to become or to have become literate in Spanish (see Fishman 1965*b;* Nahirny and Fishman 1965; Fishman 1966; Fishman, in press [*a*]).

Q-Factors

Just as *R*-factors reduce the matrix of interitem correlations, so *Q*-factors—hitherto unused in language census studies—reduce the number of interperson correlations (see Cattell 1962; Cronbach 1953; Cattell 1966; Cattell, Coulter, and Tsujioka 1966). Use of *Q*-factors helps us answer the question: how many "differently performing" subpopulations or networks are in the bilingual speech community under study? The fact that diglossic speech communities reveal marked functional differentiations in their code matrix should not lead us to assume that *all* segments of any speech community necessarily have equal access to all the available codes or make identical functional differentiations between them; *Q*-factors help identify behaviorally different segments of the speech community—in our case, "claimingly" different subpopulations or networks insofar as the questions of the language census are concerned.

Five *Q*-groups were differentiated on the basis of the initial census replies. That the *Q*-classification was essentially reliable for the kind of data at hand is indicated by the fact that 94 percent of the 124 individuals in our reinterview sample were classified in the same *Q*-group on the basis of the reinterview returns available for them.[9]

Factor Differences between *Q*-Groups

Table 4 presents the average scores for individuals in each of the five *Q*-groups on the two highest loading items in each factor. Reviewing the dif-

[9] The stability of *Q*-group classification derives from the fact that it depends less on the stability of any individual item than on the overall performance profile of individuals across all items. For the 124 cases under consideration, the following table reveals that it is primarily for *Q*-group III—numerically the smallest of the five—that a question of reliability of classification arises.

Interview *Q*-Groups	Reinterview *Q*-Groups 0	I	II	III	IV	V	Total
0*	6	...	...	...	...	...	6
I	...	17	...	...	1	...	18
II	...	...	41	...	...	2	43
III	...	3	...	6	...	...	9
IV	...	...	...	...	24	...	24
V	...	...	1	...	1	22	24
Total	6	20	42	6	26	24	124

Note.—Coefficient of contingency = .90 (maximum possible for a 6 × 6 table = .913).

* Six individuals in the interview-reinterview sample were unassignable to any *Q*-group due to insufficiency of data pertaining to them.

ferences between the Q-groups on these ten items can serve as a shortcut in determining how the five clusters of individuals differ with regard to their language-census claims.[10]

The two most noticeably different groups are Q_{I} and Q_{II}. Although both score relatively low on use of Spanish at work (Factor IV), they differ substantially on all other factors. Group Q_{I} consists of relatively high-claiming individuals on Spanish literacy (Factor I), oral Spanish (Factor III), and Spanish in religion (Factor V), whereas Q_{II} consists of low-claiming individuals in each of these connections. Finally, Q_{I} individuals make intermediate claims with respect to English (Factor II), whereas Q_{II} individuals stand highest in such claims.

TABLE 4

FACTOR DIFFERENCES BETWEEN Q-GROUPS

Item	Factor	x/SD	Q-Groups: I	II	III	IV	V	Total
4. . .	I	$\bar{x}$	1.98	0.43	1.75	1.23	0.41	1.07
		SD	0.12	0.78	0.65	0.96	0.82	0.98
3. . . .	I	$\bar{x}$	1.98	0.50	1.75	1.24	0.49	1.10
		SD	0.12	0.80	0.65	0.95	0.85	0.96
7. . . .	II	$\bar{x}$	1.70	1.83	1.68	0.47	1.21	1.31
		SD	0.61	0.42	0.67	0.66	0.97	0.86
6. . . .	II	$\bar{x}$	1.58	1.97	1.70	0.63	1.49	1.34
		SD	0.71	0.21	0.53	0.65	0.86	0.83
9. . .	III	$\bar{x}$	2.00	1.72	2.00	2.00	2.00	1.91
		SD	. . . .	0.69	. . . .	. . . .	. . . .	0.41
1. . .	III	x	2.00	1.68	1.94	1.90	1.66	1.82
		SD	. . . .	0.52	0.24	0.30	0.56	0.44
18. .	IV	$\bar{x}$	0.50	0.50	1.00	1.80	1.00	0.97
		SD	0.76	0.58	1.00	0.63	1.41	0.92
16. . .	IV	$\bar{x}$	0.52	0.00	1.21	1.70	1.60	1.00
		SD	0.71	. . . .	0.98	0.66	0.89	0.92
21. . . .	V	$\bar{x}$	1.85	0.83	0.39	1.67	1.91	1.33
		SD	0.44	0.83	0.66	0.66	0.29	0.85
23.	V	$\bar{x}$	1.77	0.80	0.41	1.63	1.91	1.30
		SD	0.52	0.79	0.66	0.69	0.29	0.84
Total N*. . .		. . .	73	110	34	121	47	431

* Forty-six individuals from the total population of 431 were unassignable to any Q-group due to insufficiency of data available for them.

The individuals in Q-groups III, IV, and V differ less sharply from each other; nevertheless, each group is unique. Thus Q_{III} is, on the whole, rather similar to Q_{II} but is appreciably lower on use of Spanish in religion (Factor V) and higher on use of Spanish at work (Factor IV). Individuals in Q_{IV} are noteworthy in making the most meager claims for English (Factor II) but the most substantial claims for Spanish at work (Factor IV). Individuals

[10] For the means of the five Q-groups on each of the twenty-three items in the language census, see table 1, appendix 3-1, in Fishman et al. (1968). Appendix 3-1 also contains a table of item intercorrelations for all twenty-three census items (table 2).

Q_V make very modest claims for either Spanish or English in the home ntext but relatively high claims for Spanish at work (Factor IV) and in ligion (Factor V).

emographic Differences between *Q*-Groups

ır five *Q*-groups are behaviorally different with respect to claimed bilinıalism. The differences are, to some extent, related to and clarified by deographic differences obtained among these five groups (table 5). Groups I

TABLE 5

DEMOGRAPHIC DIFFERENCES BETWEEN *Q*-GROUPS

Demographic Item	Q_I	Q_{II}	Q_{III}	Q_{IV}	Q_V
ıle head of household	43.8%	2.7%	23.5%	19.0%	6.4%
male head of household	34.2%	5.4%	32.4%	26.4%	6.4%
inor offspring	10.9%	60.0%	26.5%	43.0%	61.7%
ıe-generation household	13.7%	0.9%	5.9%	8.3%	4.3%
ıree-generation household	9.6%	3.6%	5.9%	3.3%	8.5%
x: male	58.9%	52.7%	44.1%	38.8%	61.7%
;e (median years)	30 yr	11 yr	28 yr	20 yr	10 yr
rthplace:					
United States	9.6%	59.1%	17.6%	32.2%	57.4%
San Juan	6.8%	14.6%	11.8%	9.9%	6.4%
Other cities	21.9%	5.4%	23.5%	16.5%	17.0%
Towns and rural	61.6%	20.0%	41.2%	40.5%	17.0%
:cupation					
Operative or unemployed	48.0%	7.3%	38.2%	23.1%	8.5%
Craftsman	20.6%	....	11.8%	6.6%	2.1%
White collar or professional	4.1%	4.6%	11.8%	2.5%	2.1%
Housewife	12.3%	3.6%	11.8%	20.7%	4.3%
lucation					
NP	15.1%	13.6%	14.7%	36.4%	40.4%
None	....	....	....	5.0%	....
Elementary	26 0%	52.7%	17.6%	33.0%	36.2%
Secondary and higher	58.9%	33.6%	67.6%	25.6%	23.4%
ecency of arrival:					
2 yr or less	11.0%	0.9%	11.8%	17.4%	4.2%
11 yr or more	57.5%	14.5%	38.2%	17.4%	8.5%
ccupation of head of household: craftsman + white collar + professional	34.2%	31.8%	47.1%	28.9%	14.9%
Total *N*	73	110	34	121	47

ıd III comprise primarily heads of households; groups II and V are mainly ımposed of minor children; and group IV consists of heads of households ıd minor children, in almost equal proportions. This simple difference in ›oup composition alone helps explain the higher Spanish literacy (Facır I) of groups I and III.

Although Q_I and Q_{III} are rather similar in composition vis-à-vis family ıle, they nevertheless differ markedly in other important ways. Group I ıembers more frequently live in one-generation households (i.e., houseolds with adults only), are more frequently males, tend to be somewhat ıder, and are less frequently American born and more frequently of Puerto

Rican small-town or rural origin than members of Q-group III. These characteristics tend to clarify the higher level of claiming to use Spanish at home (Factors I and III) and in religion (Factor V) for Q_{I} individuals. On the other hand, Q_{III} members tend more frequently to have white-collar occupations, to have received secondary education, and to be members of households whose heads have progressed beyond the occupational level of unskilled operative. These characteristics tend to explain the slightly higher level of English claiming (Factor II) for Q_{III} individuals, as well as their appreciably higher level of claiming to use Spanish at work (Factor IV). Although they use Spanish less frequently at home and in religion than do Q_{I} individuals, Q_{III} members seem to have the background that enables them to find positions in which their knowledge of both Spanish and English can be functional for themselves and for their co-workers.

Groups II and V, though both composed largely of minors, also differ consistently in ways that appear to clarify the observed factor differences between them. Individuals in group Q_{II} have more frequently obtained elementary and secondary or higher education, have lived in the continental United States for more years, and are more frequently members of households whose heads have progressed beyond the unskilled-operative level of occupation. These background characteristics seem to explain why Q_{II} individuals claim somewhat less oral use of Spanish (Factor III) and appreciably less use of Spanish in work (Factor IV) and religion (Factor V). On the other hand, Q_{II} individuals claim slightly more Spanish literacy (Factor I) and appreciably more English (Factor II). Indeed, Q_{II} individuals claim the most English and the least Spanish in our population as a whole. All in all, the differences between Q_{II} and Q_{V} individuals may be indicative of the differences between youngsters who are "making it" and those who are not, between those youngers who are moving toward increasing interaction with general American speech networks (and behavior and value networks as well) and those who are more inwardly oriented toward the behavioral and linguistic styles of the Puerto Rican neighborhood.

Finally we come to Q_{IV} individuals. As mentioned above, this is the only group composed of nearly equal proportions of adults and children. As a result, it tends to occupy an intermediate position on most demographic variables between those groups composed largely of adults (Q_{I} and Q_{III}) and those composed largely of minors (Q_{II} and Q_{V}). It is more onesided (rather than intermediate) on certain variables, however, and these may be thought of as typifying this cluster of individuals. Members of Q_{IV} are more frequently female, more frequently housewives, frequently of meager educational attainment, and most frequently recently arrived in the continental United States. These characteristics may help explain why Q_{IV} individuals claim the least English usage (Factor II), on the one hand, and the most use of Spanish at work (Factor IV), on the other hand, while remaining intermediate on Spanish literacy, oral Spanish, and Spanish in religion (Factors I, III, and V). On the whole this cluster of individuals may be considered to represent those adults and children—largely female—who

-e expected to be most sheltered from interactions with Americans outside ıe home and neighborhood and from English usage within.

nalyses of Variance

oth *R*- and *Q*-factors are ***emic***[11] approaches to data analysis. The analysis f variance, on the other hand, is an ***etic*** approach in that it concerns posble differences between previously delineated variables rather than funconal groupings (of behaviors, of individuals) that "naturally" derive from ıe data or are extracted from it on a post-hoc empirical basis. Language nsus data—like all census data—has most frequently been subjected to tic analysis, since such analysis is obviously more suitable for the large umber of analyses (across time and across subpopulations) to which such ata are subjected. The present study was fortunate in being able to utilize oth approaches and thus to benefit from both, besides being able to sugest the extent to which their respective findings are complementary.

Four demographic variables were selected (as "between group" main ffects), and their relationship to variance in factor scores was examined ı Factors I, II, and III (for which largest *N*s were available). Two of these ariables represent individual characteristics: age and birthplace. The reaining two represent household characteristics: generational range and ccupation of head (male head, where both male and female heads exist). 'he analysis of variance utilized was that type which proceeds via regreson analysis; this not only yields an exact solution but—unlike the tradional analysis of variance—also indicates the cumulative and incremental alues of the variables under study.[12]

Tables 6 and 7 reveal that Factor I (Spanish literacy) and Factor III oral Spanish) are significantly related to the same set of main effects and

The *emic-etic* distinction in sociolinguistics is based on an analogy to the phon*emic*-hon*etic* distinction in linguistics proper. Phonemic analysis is concerned only with those ounds that are consistently and meaningfully differentiated by native speakers. Thus b/ and /p/ represent a phonemic difference for native English speakers, as in the differnce between "bin" and "pin." On the other hand, phonetic analysis is concerned with ll sounds that are produced by speakers, whether meaningfully contrasted or not. Thus he *p* in "pin" and the *p* in "spin" do not sound different to linguistically untrained peakers of English, although the first is aspirated and the second is unaspirated. Since he contrast between aspirated and unaspirated *p* is *not* related to any differences in neaning on the part of English speakers, it is a phonetic rather than a phonemic difference n English (whereas it does represent a phonemic difference in other languages, e.g., in Bengali). For further comments concerning the emic-etic distinction in linguistics see any ntroductory linguistics text such as Hockett (1963). For further comments concerning he emic-etic distinction in sociolinguistics, see Fishman (in press [*b*]).

'The analysis of variance, whether via regression analysis or by more usual computaional methods, has also not hitherto been utilized for analyzing census-type data. This s certainly to be regretted, since analysis of variance is far superior to the usual inspecional methods which are limited to noting the directional consistency of percentages in ross-tabulated variables considered two at a time. Since references to traditional omputational approaches to the analysis of variance are easily obtainable, only the omewhat more novel approach via regression analysis need be referenced here. For theoretical, computational, and substantive presentations, see Bottenberg and Ward (1963), Cohen (1965; 1968*a*; 1968*b*).

interactions. However, for Factor I these variables produce a cumulative multiple R of .712, whereas for Factor III they are somewhat less appropriate predictors, yielding a cumulative multiple R of only .407. The best single predictors for both factors (in terms of zero-order rs) are the interaction between age and generational range,[13] followed closely by birthplace. Note, however, that with respect to Spanish literacy the interaction between a respondent's age and the generational range of his household also has incremental significance (even after all four main effects have been included

TABLE 6

ANALYSIS OF VARIANCE VIA REGRESSION ANALYSIS OF FACTOR I SCORES ($N = 385$)

Variables	r	R	R^2	Cum R	Cum R^2	F_{R^2}	ΔR^2	$F_{\Delta R^2}$
Age:								
Scale 1–5	.554	.571	.326	.571	.326	90.6	....	....
Quadratic	.164							
Birthplace	.530	.530	.281	.635	.403	147.9	.067	41.9
Generational range:								
Scale 1–3	−.113	.260	.067	.648	.420	3.5	.017	5.7
(1 + 3) vs. 2	.218							
Occupation:								
Housewife vs. white collar vs. operative	.100	.194	.038	.666	.444	7.6	.024	0.8
Housewife vs. operative vs. white collar	.180							
Age × generational range:								
Aspect 1	−.231	.620	.384	.712	.507	80.0	.063	16.1
Aspect 2	.457							
Aspect 3	−.607							
Age + birthplace + (age × generational range)	....	.705	.497	.705	.497	63.8	.094	23.5*
Total main effects + (age × generational range)	....	.712	.507	.712	.507	39.0	.063	1.7†

* Δ from age + birthplace.
† Δ from age + birthplace + (age × generational range).

[13] Since not all theoretically possible age × generational range interactions actually occur (e.g., there are no children in one-generation households), age was dichotomized (eighteen and younger, nineteen and older) for the purposes of this analysis, and only three aspects of the interaction in question were recognized, as follows: (1) nineteen and older in two- or three-generation households vs. eighteen and younger in two- or three-generation households vs. nineteen and older in one-generation households (coded −1, 0, +1), (2) nineteen and older in three-generation households vs. nineteen and older in one-generation households *and* eighteen and younger in two- or three-generation households vs. nineteen and older in two-generation households (coded −1, 0, +1), (3) eighteen and younger in three-generation households vs. nineteen and older in one-, two-, or three-generation households vs. eighteen and younger in two-generation households (coded +1, 0, −1).

in the multiple prediction), yielding a $F_{\Delta R^2}$ of 16.1, whereas this interaction has no such incremental value for Factor III.[14] Young people are more likely to have Spanish literacy and oral Spanish claimed for them if grandparents live in the household, but these claims have incremental significance only for Spanish literacy.

Turning now to Factor II (English), we find a substantially different story (table 8). Only one of our original four predictors is clearly effective (age, with a F_{R^2} of 50.5); one is marginally effective (birthplace); the other

TABLE 7

ANALYSIS OF VARIANCE VIA REGRESSION ANALYSIS OF FACTOR III SCORES ($N = 413$)

Variables	r	R	R^2	Cum R	Cum R^2	F_{R^2}	ΔR^2	$F_{\Delta R^2}$
Age:								
Scale 1–5	.262	.271	.073	.271	.073	13.8	....	....
Quadratic	.055							
Birthplace	.315	.315	.099	.345	.119	45.0	.036	16.4
Generational range:								
Scale 1–3	−.015	.185	.034	.375	.141	7.4	.022	5.2
(1 + 3) vs. 2	.186							
Occupation:								
Housewife vs. white collar vs. operative	.164	.164	.027	.407	.165	5 6	.024	5.7
Housewife vs. operative vs. white collar	.023							
Age × generational range:								
Aspect 1	−.087							
Aspect 2	.194	.328	.108	.407	.165	17.9	.000	0.0
Aspect 3	−.327							
Age + birthplace + (age × generational range)	....	.399	.159	.399	.159	12.6	.040	6.3*
All main effects + (age × generational range)	....	.407	.165	.407	.165	7.8	.006	0.7†

* Δ from age + birthplace.
† Δ from age + birthplace + (age × generational range).

[14] Degrees of freedom are defined as follows in the analysis of variance via regression analysis:

$$\text{for } F_{R^2} = \frac{\text{numerator}}{\text{denominator}} = \frac{K(= \text{number of predictors})}{n - K - 1}$$

$$\text{for } F_{R^2} = \frac{\text{numerator}}{\text{denominator}} = K_b(= \text{added number of predictors})/$$

$$n - K_a(= \text{prior total number of predictors before adding a new predictor}) - K_b - 1 \, .$$

two (both household variables) are without significance. Although the in cremental value of the interaction between age and generational range i substantial ($F_{R\Delta^2}$ = 12.8), the incremental value of adding another mai effect, education, is obviously even greater. With education added as predictor, the multiple R obtained for Factor II rises to .632.

Analyses of variance have enabled us to see that claims for Spanish liter acy are most predictable and claims for oral Spanish, least predictable, fron the variables we have selected as main effects, although each of these is in dependently significant in most instances. Oral Spanish is claimed too wide ly in this speech community for variables other than birthplace to con

TABLE 8

ANALYSIS OF VARIANCE VIA REGRESSION ANALYSIS OF FACTOR II SCORES (N = 406)

Variables	r	R	R^2	Cum R	Cum R^2	F_{R^2}	ΔR^2	$F_{\Delta R^2}$
Age:								
Scale 1–5.......	.167	.450	.202	.450	.202	50.5	....	...
Quadratic.	−.424							
Birthplace......	.093	.093	.009	.465	.216	3 6	.014	7.0
Generational range:								
Scale 1–3.......	−.058	.067	.004	.465	.216	0 8	.000	0 0
(1 + 3) vs. 2....	−.030							
Occupation:								
Housewife vs. white collar vs. operative..	.061	.087	.008	.469	.220	1.6	.004	1 0
Housewife vs. operative vs. white collar...	.072							
Age × generational range:								
Aspect 1........	−.009	.050	.002	.538	.289	0.2	.069	12 8
Aspect 2.	−.008							
Aspect 3 .. .	.036							
Age + birthplace + (age × generational range)....	...	.522	.272	.522	.272	25.2	.056	10 4*
Four main effects + (age × generational range)....	....	.538	.289	.538	.289	16.1	.017	2 4†
Education:								
None vs. elementary vs. secondary.......	.500	.520	.270	.579	.335	75 0	....	....
Other vs. secondary.......	.116							
Age + birthplace + education.......	....	.579	.335	.579	.335	41.9	.119	35 0‡
Total (five main effects + interact)	....	.632	.400	.632	.400	22.2	.111	37 0§

* Δ from age + birthplace.

† Δ from age + birthplace + (age × generational range).

‡ Δ from age + birthplace.

§ Δ from four main effects + (age × generational range).

tribute much to the prediction obtainable on the basis of age alone. English and Spanish literacy, on the other hand, are less widely and more variably claimed, and therefore more predictable from a variety of individual and household characteristics; they also attain significant incremental gain from considering the interaction between an individual's age and the generational composition of his household even after four main effects have been utilized.[15] Literacy in general, and Spanish literacy in particular, seems to be more frequently acquired by young people if grandparents share their household. Presumably this is because there is no formal institution for acquiring Spanish literacy, and grandparents are simply more able than parents to introduce children to Spanish reading and writing. English, on the other hand, is not primarily home based. Its use is a result of informal exposure to the English-speaking world and of exposure to formal education, the lion's share of which is in English. Finally, note that several of the very demographic variables that have helped us descriptively differentiate between emic Q-groups (constructed so as to be maximally different in census-claiming behavior) are also significant etic dimensions in accounting for variance in factor scores.

SUMMARY

Sociolinguistically designed language-usage censuses or surveys can elicit reliable self-report data revealing the functional allocation of languages in bilingual-diglossic speech communities. The usage patterns disclosed are relatable to reliable and meaningful respondent and subgroup characteristics. These findings, in conjunction with the finding that language-usage claims in response to sociolinguistically designed census/survey questions have substantial validity in comparison with independent psychological and linguistic measures of sociolinguistic criteria, should encourage sociologists and other social scientists to engage in further large-scale studies of intrasocietal variation in language use, language awareness, and overt behavior toward language functions and use patterns.

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[15] The interaction between age and generational range is discernible from the fact that mean scores on Factors I and III show a dip for two-generational households, while mean scores on Factor II reveal a peak for two-generational households relative to one- and three-generational households. Separate analyses of variance reveal that while the claims for both adults and offspring differ by generational range on all three factors, it is only for the offspring that these differences attain significance.

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Queue Culture: The Waiting Line as a Social System[1]

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The long, overnight queue is seen as a miniature social system faced with the problems of every social system, formulating its own set of informal rules to govern acts of pushing in and place keeping, leaves of absence, and the application of sanctions. Cultural values of egalitarianism and orderliness are related to respect for the principle of service according to order of arrival which is embodied in the idea of a queue. The importance of time in Western culture is reflected in rules relating to "serving time" to earn one's position in line, and to the regulation of "time-outs." The value of business enterprise is expressed in the activities of professional speculators and queue "counters." Queue jumping is discouraged by a number of constraints, but, if social pressure fails, physical force is seldom used to eject the intruder. Principles of queue etiquette are illustrated with empirical and anecdotal evidence from the study of Australian football queues.

This paper deals with the kinds of formal and informal arrangements made in queues to regulate behavior, to recognize the priority of early-comers, and to inhibit the growth of conflict. The study of queues is an attempt to describe the patterns of behavior which attend waiting in lines where a great deal of time, discomfort, and risk of disappointment must be endured before the desired commodity is obtained. Our focus is on the forms of etiquette developed to regulate life in the queue and to minimize the amount of suffering experienced while waiting. The queue culture provides direction on such matters as place-keeping privileges, sanctions against pushing in, and rights of temporary absence from the waiting line. Evidence that the queue constitutes an embryonic social system is based primarily on the study of long, overnight lines for football tickets in Melbourne, Australia.

THE STUDY

Every Saturday afternoon in the month of September, over 100,000 spectators crowd into a stadium in Melbourne, Australia, to watch the "world series" of Australian rules football.

On August 15, 1967, approximately 10,000 people formed twenty-two queues outside the Melbourne Football Stadium to buy 14,000 sets of tickets for the four games. It was the last opportunity to get tickets because

[1] This study was supported by a grant from the Comparative International Program of the Department of Social Relations, Harvard University. The helpful suggestions of Thomas Cottle, George Homans, Alex Inkeles, Irving Janis, and Gerald Platt are gratefully acknowledged. I wish to express my gratitude to Ruth Chaplin and Frank Nordberg for their assistance in collecting and analyzing the data.

mail applications for the bulk of the tickets had been oversubscribed weeks before. A great many of the 10,000 faced disappointment because most queuers usually buy the full allotment of two adult and two children's tickets.

From 6 A.M. until 8 A.M., when the selling windows opened, a team of nine research assistants, male psychology majors from the University of Melbourne, conducted short, standard interviews with 216 people in ten of the twenty-two queues. Each interviewer was randomly assigned a queue. Starting with the first person in line, the procedure was to approach every tenth person. The request was brief and informal: "I am from the University, and we are doing a study of how people feel about the queues. Would you care to answer a few questions?" Only two refusals were encountered; with the exception of one queue, all interviews were completed by 8 A.M. when the lines began to move. Questions covered attitudes toward the system of queueing, evidence of pushing in and place keeping, arrangements to make the task of queueing more pleasant, as well as estimates of position in line and chances of getting a ticket. Interviewers also made notes on their observations of the physical shape of the queues and on their impressions of the mood and morale of the people in them. Data from the Melbourne stadium are the main source of evidence cited in this paper.

Members of the research team also conducted interviews and made observations in the club queues at suburban Collingwood, Carlton, and Richmond, each of which had allocations of 1,000 tickets for club members. Data gathered from the club queues provide additional evidence presented in this paper.

THE QUEUE TRADITION

The system of selling seat bookings for the football finals several weeks before the start of the series was first introduced in 1956. Before 1956, people queued outside the stadium on the day of the game, and "first in" took the best seats. Over the years, because of the large increase in the number of football followers, the queue system became accepted as the only workable method for selling tickets. Although there were complaints from the public, the great overnight queues became a regular event at the end of a Melbourne winter. And as the queues took on an institutional character, increasing numbers of veterans began to regard them as a kind of cherished tradition or ritual. For example, even during the regular season, although it was possible to get choice seats two hours before the commencement of most Saturday games, long queues formed outside stadiums on Friday, perhaps to train for the big one in August.

The queue of 1965 was perhaps the most remarkable, for in that year 25,000 people waited for 12,500 tickets, some of them for over a week, in mud and drizzling rain. Queuers erected a shantytown of tents and caravans outside the stadium, and conditions, according to the Melbourne town clerk rapidly became "squalid and unhygienic." In 1966, to prevent a recurrence of the shantytown, the Melbourne City Council banned tents and

camping equipment from the queues and prohibited the lighting of fires. Also, queues or assemblies were not allowed outside the stadium until twenty hours before ticket sales started. The city council regulations made the wait for tickets colder, but much shorter, and accordingly it was decided to retain them the following year.

In the 1967 queues, our interviewers noted that people improvised tents by tying tarpaulins to the side of barricades, and brought stretchers, sleeping bags, and supplies of liquor to make themselves comfortable during the wait. Even after a cold night in the open, 26 percent of the respondents claimed they were happy with the queue system. Only the aged and those who had to go straight to work felt very unhappy about their night out. In 1966, when a sample of 122 queuers were interviewed on a mild afternoon before the ticket windows opened, 47 percent reported satisfaction with this method of selling tickets.

At Collingwood, the Melbourne City Council regulations did not apply, and accommodations in the first part of the queue resembled a refugee camp. The first three families in line, numbering approximately thirty men, women, and children, pitched a bedouin tent on the sidewalk fronting the ticket box, and settled down to a six-day wait around a blazing camp fire. Some enthusiasts moved out of their homes and took up formal residence in the queue. Five days before tickets went on sale, the general secretary of Collingwood, Gordon Carlyon, received a letter addressed to "Mr. Alfred McDougall, c/o Queue outside Collingwood Football Ground, Collingwood, 3066." The *Melbourne Herald* of August 8, 1967 reported that Mr. Carlyon threaded his way through beds and tents on the sidewalk outside the stadium to deliver the letter. Melbournians had not only started to tolerate queues but actually seemed to be enjoying them. One woman outside the Melbourne stadium was heard to remark: "People are always knocking queues, what I would like to know is what people like myself would do without them" (*Melbourne Age*, August 16, 1967).

It seems that the means behavior, that is, lining up to get tickets for the event, almost becomes an end in itself, with its own intrinsic rewards and satisfactions. What does queueing mean, and why has it become an important occasion in the lives of these people? The answer lies partly in the publicity and recognition given to the queuers and partly in the challenge and excitement. For several days in August the attention of Melbourne and its mass media is focused on the brave queues outside its stadium. To be able to claim, in football-mad Melbourne, that one has stood through the night and obtained tickets earns the kind of kudos and respect that must have been given to those who fought at Agincourt. And there are other pleasures. Outside the stadium something of a carnival atmosphere prevails. The devotees sing, sip warm drinks, play cards, and huddle together around the big charcoal braziers. If he has come as part of a large group, or a cheer squad, the aficionado enjoys a brief taste of communal living and the chance to discuss and debate endlessly the fine points of the game. Above all, football fans regard the great queue as an adventure, an unusual and yet tradi-

tional diversion at the end of a Melbourne winter, as the football season approaches its exciting climax.

PROFILE OF THE QUEUER

The typical queuer is male, not yet twenty-five years of age, lives in a working-class suburb, and probably has absented himself from work to wait in line. Together with three friends, he has waited for at least fifteen hours to get tickets to watch his club play in the finals. He cannot explain why he likes football, but he has followed his team faithfully since childhood. He claims he would still be queueing even if his team were not playing, but the scarcity of supporters of nonfinals teams in the queue indicates that this is not likely. He has not counted the number of people ahead of him and has no real idea of the number of tickets for sale to the queue. He is fairly confident that he will get tickets, and he does not seem very unhappy about the queue system.

THE PROFESSIONAL QUEUER

When demand exceeds supply, it is inevitable that ticket speculators move into the queue in search of supplies for the flourishing market in hard-to-get tickets.

The Australian football queue contains two kinds of speculators: groups of highly organized people, hired at a fee to wait and buy tickets for large business concerns; and small-time operators, who resell their two tickets to the highest bidder. Often the speculators are university students, whose earnings help to pay tuition fees. Two days before ticket sales opened at the Melbourne stadium, twenty students flew from Tasmania to the mainland to join the queue. The airline company, which hired them to buy the tickets, also provided free return flights, accommodation at a leading hotel, and taxis during their stay (*Melbourne Herald*, August 12, 1967). An advertising agency engaged Melbourne University students to stand in line for one dollar an hour each, the tickets to be given away as prizes. Other students, operating as free-lance scalpers, asked an outraged public fifty dollars for $5.60 tickets, and had no difficulty getting their price.[3]

It is difficult to estimate the number of speculators in the football queues, as most people would be reluctant to admit to this kind of activity, but it was apparent from the number of advertisements for tickets in the "Wanted to Sell" columns of the Melbourne newspapers that a large proportion of queuers turned professional in the week following the ticket sales.

In the Melbourne stadium lines, very few people actually counted their position, perhaps because they believed there was no point in it since there was no accurate information available about the number of tickets available to each line (see Mann and Taylor 1969). In club queues, however, a different

[3] Speculation in the physical position itself is not found in Australian queues, as it is in waiting lines for Broadway hit shows. At smash hits it is not unusual for people to make a business of getting in line early in order to sell their advanced positions to latecomers for a large fee (see *Life*, September 24, 1956).

set of conditions obtained. There was usually a single mammoth queue (at Richmond it included over 3,000 people and ringed the perimeter of the stadium). More important, the number of tickets on sale was well publicized, and therefore it was possible to make a fairly accurate estimate of the chances of getting tickets, if the person had accurate information about his position in line. Accordingly, the estimates of position in the club queues were somewhat more accurate than at the stadium because people either had taken the trouble to count the number ahead or had consulted with a queue "counter." Queue counters are boys who count the queue at regular intervals, if it is long and winding. Queue counters, like ticket speculators, "invent" businesses to go along with what began simply as a necessary social act. At Carlton a group of boys went backward and forward during the night, counting the queue, and at Richmond the counters turned professional and, for a fee (ten cents), gave each customer up-to-date information on the number of people ahead and behind, as well as topical news and gossip.

THE PRE-QUEUE

A queue is a line of persons waiting in turn to be served, according to order of arrival. But the act of queueing involves more than the acquisition of a right to prior service because of early arrival. To validate this priority, the person must also spend time in the queue, not only to show latecomers that he occupies a given position, but also to demonstrate that his right to priority is confirmed by an unquestionable willingness to undergo further suffering to get the commodity.

If all that is required to reserve a place in a queue is the act of registering order of arrival, everyone would make an effort to be present at the time of queue formation. This would either lead to uncontrolled competition and hostility at the time of registration, or more probably, the formation of prequeues to establish recognition of the right to priority in the official queue.

The pre-queue is an unofficial line which forms spontaneously before the official, recognized queue is allowed to form. The Melbourne football queues were not allowed to form until 3 P.M. of the afternoon before the sale of tickets. To enforce this regulation, police erected a perimeter of barricades around the wall of the stadium. Nevertheless, hundreds of people gathered in the park hours before queueing was officially allowed to start and, without police direction or intervention, spontaneously formed lines outside the barricades. At 3 P.M., when the barricades were removed, they folded their chairs, and keeping the lines intact, filed in perfect order to the ticket windows to commence the official seventeen-hour wait. The formation of a prequeue, in this instance, almost certainly functioned to prevent an explosive situation which could have occurred had people failed to sort themselves into some kind of recognized order before the official line started. The lack of competition for positions among the early-comers can be explained in terms of the reward-cost structure in the first part of the line. There is little to be gained from being first, rather than twentieth or fiftieth (all are virtually

guaranteed a ticket), but there is much to be lost if aggressive competition leads to physical damage and general disorder.

SERVING TIME IN QUEUES

There is a curious dilemma in the overnight queue. If there is a unanimous willingness to respect the order of arrival, it is pointless to require everyone to spend an uncomfortable night in the open. But if large numbers absent themselves, those remaining to protect the queue from outsiders will feel that their greater inputs of time and suffering now outweigh the merits of early arrival and entitle them to priority of service. Also, they will feel no responsibility for minding the places of people who, by their absence, are in no position to offer reciprocal place-minding services. In recognition of the conflicting considerations of unnecessary suffering caused by continuous occupancy, and the necessity to validate one's position by spending some time in residence, various arrangements are made which function to lessen the ordeal while protecting the rights of early-comers. Usually the arrangements represent a compromise which allows the queuer to take brief leaves of absence while retaining undisputed rights of reentry.

In Australian football lines, "time-out" is accomplished by two informal arrangements. Early-comers, who usually come in groups of four or five, often organize a "shift system," in which members spend one hour on with four hours off. One person can hold up to four places until the relief reports back to take over as group custodian. In our survey, an average of 39 percent of respondents in the first 100 of every queue reported that they had organized a shift system; in the latter part of the queue only 24 percent reported participation in a shift system. Sometimes the system involves a large group of people who share not only place-keeping duties but also facilities for eating, sleeping, and entertainment. The *Melbourne Herald* of August 15, 1967 described a seventeen-year-old girl, one of twelve people who took turns to leave the queue to eat and sleep in one of the few trailers found outside the Melbourne stadium. The same newspaper carried a story of a young scalper who combined business with pleasure: "I was one of a group of 20 students who stood together all night in the queue outside the ground. We were well organized. A couple of us kept our positions, and the others went out on the town" (*Melbourne Herald*, August 22, 1967).

It is rare for queuers at the head of the line to come alone; 94 percent of the respondents questioned in the first 100 of every line reported that they had come with others (see table 1). However, a large minority toward the end of each line came alone; while their need for time-outs was less pressing, they also made arrangements to cover brief absences if necessary. It is an accepted practice to "stake a claim" in a queue by leaving some item of personal property. One can keep a place in a line with a labeled box, folding chair, haversack, or sleeping bag for quite long periods. The object stands for the person and his place, symbolism reminiscent of burial customs of the

ancient Egyptians.[8] During the early hours of waiting, when many people were enjoying a carefree game of football in the surrounding park, the queues often consisted of one part people to two parts inanimate objects. The norm in leaving position markers is that one must not be absent for periods longer than two to three hours. In the Collingwood queue of 1966, irate latecomers, who noticed that many people in the middle of the queue had not made an appearance for most of the day, spontaneously seized their boxes and burnt them. The latecomers were protesting the violation of the principle of serving time to earn occupancy of a position. In the ensuing melee, scores of people made significant advances in their positions. Because arrangements for absence from the football queue are of necessity extremely informal, inefficiency and abuse often occur. To ensure protection of their

TABLE 1

PATTERNS OF QUEUE-RELATED BEHAVIOR AS A FUNCTION OF POSITION IN LINE: MELBOURNE FOOTBALL QUEUES, 1967

Actual Position in Line	Member of an Organized Shift System		Came with Others		Observed Hostile Response to Push-in Attempt		Consider Place-keeping Permissible	
10–100 ($N=95$).......	39%	$Z=1.91$ $P<.05$	94%	$Z=2.81$ $P<.01$	46%	N.S.	25%	N.S.
110–200 ($N=82$)......	23%	N.S.	78%	$Z=1.41$	33%	N.S.	35%	N.S.
210–330 ($N=39$)......	25%		64%	N.S.	27%		24%	

NOTE.—Number of respondents varies slightly for each question.

valued positions, some do not trust the shift or marker systems but prefer to keep a constant vigil which lasts the entire life of the queue.

First come, first served, the fundamental concept of queueing, is a basic principle of the behavior referred to as distributive justice (Homans 1961). There is a direct correspondence between inputs (time spent waiting) and outcomes (preferential service). Generally, if a person is willing to invest large amounts of time and suffering in an activity, people who believe there should be an appropriate fit between effort and reward will respect his right to priority. We have seen, however, that the principle of distributive justice is elaborated to encompass the need for leaves of absence in marathon queues. In recognition of the fact that continuous residence in the line imposes great hardship, members come to an agreement on the minimum inputs of time necessary to validate occupancy of a position. It is reasonable

[8] Markers such as notebooks, coats, newspapers, and umbrellas are often used to defend a "reserved" space in public places, such as a crowded cafeteria or study hall (see Sommer 1969).

to claim that rules regulating time spent in and out of the line are the essential core of the queue culture.[4]

QUEUE JUMPING

Placekeeping and pushing in violate the principle of first come, first served. When people at the end of a queue feel certain that the violation does not jeopardize their own chances of obtaining the commodity, there is likely to be some irritation but no attempt to eject the offender. Stronger measures are likely, however, if people at the tail end believe that the lengthening of the line worsens their prospects of receiving service.

Since there is a great deal at stake, football queuers are especially annoyed by any attempt to jump the queue, and they adopt a variety of physical and social techniques to keep people in line. At certain times in the life of the queue when police supervision was minimal, queuers had to devise their own constraints. The most extreme constraint was physical force. During the early hours of August 15, five men were taken to hospitals after four separate brawls broke out in the ticket lines (*Melbourne Herald*, August 15, 1967). The strategic placement of barriers acts as a constraint against would-be infiltrators. It was observed that people in the middle of the queue worked together to erect barricades from material left in the park. Keeping close interperson distance also serves to maintain the "territory" in the face of would-be intruders. At times of maximum danger, and in the hour before the ticket windows opened, there was a visible bunching together, or shrinkage, in the physical length of the queue, literally a closing of the ranks. The exercise of effective social constraints depends on the capacity for cohesive action on the part of the queuers. At the stadium, whenever outsiders approached the head of the queue, they were intimidated by vociferous catcalls and jeering. Ordinarily, this mode of protecting the queue was successful during daylight, the pressure of concerted disapproval inhibiting all but the boldest. During the hours of darkness, social pressure proved less effective; the knowledge that one cannot be seen easily undermines social pressure and shaming as a technique.

Despite these constraints, many latecomers attempted to push in, and it was apparent that some succeeded. Letters to the newspapers by disappointed queuers testified to the activity of queue jumpers. One man who missed out in the Carlton queue claimed that he had been dislodged from 185th to 375th place in the span of two hours. When asked, "Has anyone tried to push in?" respondents in every part of each queue reported that they had witnessed attempts to jump the queue, but only in a minority of cases had the intruder been ejected. According to the reports of our re-

[4] Queue systems with inbuilt guarantees of distributive justice are to be found in both the United States and USSR. At the weekly line for tickets to the Metropolitan Opera in New York, an unofficial "keeper of the list" registers applicants in order of arrival, assigns numbers, and checks names when the queuers appear for roll call every three hours (see *New Yorker*, January 14, 1967). In Moscow, when scarce goods go on sale, a series of queue custodians take turns "standing guard" and list the names of interested customers as they arrive throughout the night (see Levine 1959, pp. 338–39).

spondents, the act of intrusion was usually met with passivity rather than a physically hostile response, especially toward the end of the line, where people came alone and were not organized for dealing with intruders (see table 1). Yet, when asked what they would do if someone tried to crash the queue immediately in front of them, respondents were almost unanimous in claiming that they would resort to physical force.

According to our respondents' reports, pushing in occurred most often near the tail of the queue. This seems puzzling at first, for, if someone is going to risk pushing in, it seems sensible to try at the front, where there is a greater certainty of getting tickets. However, we must bear in mind the more effective policing at the front, as well as the decreased risk toward the rear of the queue, where, in absolute numbers, fewer people are put out by the violation and hence there is less likelihood of concerted action. In brief, opposition to a queue jumper decreases as a function of the number of people whose chances of getting tickets are affected by the intrusion; at the end of the line there are very few such people. Ironically, however, it is these people, regardless of where pushing in occurs, who stand to lose most by the infraction because their chances of getting tickets are put in even greater jeopardy.

Why does the queue fail to act in unison to dismiss the queue jumper? To some extent, the varying interests of people in different parts of the queue provide an answer. People at the front of the queue do not care particularly about pushing in which occurs behind them because they do not suffer from the intrusion. Of course, if queue jumping becomes widespread, the early-comers show concern because their positions may be threatened by latecomers who realize that the entire line is vulnerable. But usually they have nothing to gain and much to lose from becoming involved in policing the queue. It is surprising, however, that people after the point of intrusion do not act together to expel the violator, since they all suffer equally by the loss of a place. It seems that responsibility for evicting a trespasser falls squarely on the shoulders of the person who is the immediate victim of the violation, that is, the person directly behind the violator. Those further back may jeer and catcall, but the immediate victim is expected to take the initiative in ejecting the queue jumper. The reasoning seems to be that the victim, either through his passive looks or careless surveillance of his territory, must have given some encouragement to the queue jumper, so he is now obliged to handle the situation without causing unpleasantness for other people.

The reluctance of queuers to exert physical action against queue jumpers may also be related to the nature of informal versus formal organization of the queue. In any informal queue, there are many signs of organizational control, role prerogatives, and orderly behavior, which are almost exactly the same as those in well-organized queues, where there is real policing and monitoring of the line. Therefore, people will assume that the informal queue will function in much the same way as the organized queue. When acts of pushing in and disorder occur, members of the queue realize they were mistaken and jeer spontaneously, exert informal pressure, and make

threats to preserve their positions. If verbal constraints fail, physical violence emerges as a last resort. At this point there is a reluctance to pursue the matter further because more may be lost from physical action than from a small loss in position. The person who jumps the queue could be desperate, and the immediate victim anticipates the possibility that a struggle could cause injury and damage. If the police action is unsuccessful, the person is made to look foolish in the eyes of the onlookers. It is also possible that, if the struggle sets off a widespread melee, he stands to lose more than face and position. Therefore, if verbal censure fails, members of the queue fall back on a conspiracy of silence to ignore minor violations. Resorting to physical violence seems to represent a kind of public acknowledgment that the queue is no longer organized and under control. Once this happens, a grave danger exists that people in less favorable positions, as well as outsiders, will take advantage of what is then recognized to be a helpless, unorganized queue. To prevent this, occasional minor infractions, if they are not met successfully by verbal threats and jeering, are seldom handled by physical threats and violence. The use of physical methods, especially if they prove unsuccessful, are a signal to others that the queue organization is about to disintegrate completely, and this may actually serve to encourage an epidemic of queue jumping.

One reason for the prevalence of pushing in, and the failure to exert effective action against it, is the confusion which exists between illegal acts of entry and the somewhat more acceptable act of place keeping. Because place keeping occurs fairly frequently, it is not always clear whether an individual who moves boldly into a line is attempting to crash the queue or is merely joining his group. Therefore many are reluctant to challenge the entry of outsiders during the early hours of the queue. Although the custom of place keeping is a cause of friction, only informal rules have been formulated to regulate its practice. Of the respondents, 29 percent believed that it is permissible to keep a place for someone, and that people behind would not care (see table 1). However, only a handful of queuers admitted to actually keeping a place for someone. People do not admit freely to place keeping because the newcomer usually makes his appearance only in the last hour before tickets go on sale, and people already in line are likely to be very resentful.

THE QUEUE AS A SOCIAL SYSTEM

The queue, although made up of numerous groups of strangers gathered together temporarily, emerges as an embryonic social system with a set of norms for controlling conflict.

Parsons (1951) maintains that social systems develop spontaneously whenever two or more people come into some stabilized, patterned mode of interaction. He lists three properties of any social system: (1) two or more actors occupying differentiated statuses or positions and performing differentiated roles; (2) some organized pattern governing the relationships of the members, describing their rights and obligations with respect to one anoth-

er; and (3) some set of common norms and values, together with various types of shared cultural objects and symbols.

The long, overnight queue has all three characteristics of a social system. While the queue may not directly allocate different statuses or roles to its members, the members themselves assume different roles. In and around every queue there is a host of people: professional and hired speculators, queue counters, custodians, vigilantes, police, and officials, performing a variety of queue-related tasks.

The other two properties of a social system—an organized pattern of relationships and a set of common norms—are readily identifiable in the queue. Order of arrival governs the relationship among members, while the shift system and the practice of time-outs controls the network of rights and obligations. Moreover, there are shared norms about the desirability of distributive justice, as reflected in the set of rules regulating place keeping and pushing in.

Interactive systems, such as the queue, develop within the matrix of a long-established sociocultural system which defines roles, normative standards, and goals. When a large number of people gather together and priority of service has value, a line is formed. All members bring to the new queue a host of ideas about the roles they should play, and develop firm notions about the way in which deviant behavior should be punished. Roles in the queue are drawn from and are molded by the institutional system of the larger society. The precise form of social organization, the sharing and division of labor inherent in the shift system, the preferred modes of policing the queue, the development of businesses and ticket speculation, the notion that one must earn one's place in line by spending time in it, even the very reason for queueing itself, reflect the character of the surrounding society.

The culture of the queue also draws upon and incorporates elements in the broader culture. The importance of time as a value in Western society is reflected in the emphasis placed on serving time, and restrictions on time-outs. The way in which people orient themselves toward a scarce commodity, their preference for cooperation, the entrepreneurial zeal they display in scalping tickets and charging fees for counting the queue, is a function of broad culture patterns, as well as the way society has taught them to behave.

The queue, moreover, is subject to sanctioning pressure from outside officials and onlookers, who try to bring it into conformity with societal expectations. Ultimately, of course, each queue has to work out its own final set of mutual adjustments in which socially prescribed rules about queueing are modified and embellished in various ways. A prime example of these adjustments is to be found in the various interpretations of the rules governing leaves of absence from the line.

While the queue system is embedded in a larger social matrix, it is also composed of many subsystems—groups, cliques, and coacting individuals—whose physical presence reinforces the very idea or concept of a line.

According to Parsons and Smelser (1957), there are four functional problems, or imperatives, faced by every social system: goal attainment, adap-

tation, integration, and latency. The queue, even though it is a relatively minor, short-lived social system, must confront these four problems.

The problem of goal attainment is to keep the system moving steadily toward the collective goal of its members, in this case, the purchase of tickets in an orderly manner with a minimum of unpleasantness. Before the system can move toward this goal, however, a host of instrumental and technical problems must be solved. Many of the problems are external to the queue, in the sense that they are not under the control of its members; for example, the seller (not the customer) must decide when and where people should be allowed to queue, how many lines should be formed, how many tickets will be made available, what limitation will be placed on the number of tickets sold to each customer, and so on. But the question of how to begin the queue, especially if people have gathered before the official starting time, is a problem left to the members themselves. As we have seen, the football fans solved this difficulty by forming a pre-queue, which became the officially recognized queue when the barriers to the ticket boxes were lowered.

Adaptation is the problem of bringing facilities and resources to the system which enable it to come to terms with the environment. One aspect of adaptation is the active manipulation of the environment. Thus queuers formed their line along concrete paths, constructed barriers out of material found in the park, erected shelters by tying tarpaulins to the barriers, built fires, and even brought in trailers, to make their temporary living quarters as comfortable as possible.

Manipulation of the system itself to blend with the environment is another aspect of adaptation. For the most part, the queue, rather than a single file of people, consisted of numerous knots of people, two and three abreast, who sat side by side to facilitate efficient communication and social interaction

The integrative problem, perhaps the most distinctive in any social system, is concerned with the maintenance of appropriate emotional and social ties among members of the system. In order to achieve its goals, the system must establish and maintain a high degree of solidarity and cohesion. In the queue, cohesion is achieved by establishing informal rules which are kept sufficiently general to allow individual members to adjust to the normative pattern. Those who stay out too long, and therefore are unable to make the line viable, are sanctioned, or lose their place. In a sense this represents a form of turn taking; if the queue structure is to be preserved, only some members can be permitted to take leaves of absence at any one time.

The group or clique, by means of the shift system, regulates turn taking for its members, and this ensures continuity of the line. The group, since it is the carrier of queue culture, brings a high level of solidarity to the line.

At the head of the line, the group takes on the characteristics of a community. Large family groups share eating, rest, and recreational facilities, and time spent together serves to strengthen the feelings of community. It is likely that the major factor underlying the effective policing of the head and middle regions of the line is the presence of large, coordinated groups.

The breakdown of defense against intruders in the end part of every line c be attributed primarily to the fragmented, isolated nature of the memb ship.

But even in parts of the line where organized groups are less prominer individuals trade on a mutual trust which allows them to ask one another "mind my place" and feel confident that they will be vouched for when th return from a brief leave of absence.

The latency function is reflected in two related but different problems pattern maintenance and tension management.

Pattern maintenance is the problem faced by an individual in reconcili the conflicting norms and demands imposed by his participation in t queue. Many members experience role conflicts arising out of their oblig tions to the queue and to their family or work roles. As we have seen, son queuers solve the problem by moving their entire family into the line. Ot ers are faced with a different kind of dilemma: whether or not to keep place for friends. The member who fails to commit himself to the que norms is subject to considerable social pressure. If rules governing leaves absence are not observed, the member is likely to find himself no longer pa of the queue.

Tension management is the related problem of maintaining a level commitment sufficient to perform the required role. To cope with tensi and fatigue, members introduce a variety of entertainments in and aroun the line, such as pick-up games, story and joke telling, and beer partie Time-out from the queue is, however, the major mode of tension manag ment.

The queue system is mostly concerned with the problem of pattern mai tenance and tension management because these are the most significa from the viewpoint of continuous participation and control. Of course, a critical times in the life of the queue, the other three functional problems re quire attention. Indeed, all four must be solved if the system is to contin in the state of equilibrium necessary for control and order.

CULTURAL VALUES AND QUEUEING

How do rules of etiquette develop in queues, and how do people come t recognize and respect them? To some extent, the answer lies in attitud toward queues in general, which reflect broad cultural differences in sensi tivity to queue norms, as well as the individuals' history of experience in waiting lines. Behavior in queues is a function of many variables: kind an length of queue; the importance of inputs and the value of the commodity cultural and subcultural differences in respect for time, order, and th rights of others; and individual differences in such personality charac teristics as aggressiveness and assertiveness.

The anthropologist Hall (1959) has suggested that a cultural value o egalitarianism is responsible for the manner in which queues and queuein are treated with deference in Western society. In *The Silent Language* Hal (1959, p. 157) writes: "As a general rule, whenever services are involved we

feel that people should queue up in order of arrival. This reflects the basic equalitarianism of our culture. In cultures where a class system or its remnants exist, such ordinality may not exist. That is, where society assigns rank for certain purposes, or whenever ranking is involved, the handling of space will reflect this. To us it is regarded as a democratic virtue for people to be served without reference to the rank they hold in their occupational group. The rich and poor alike are accorded equal opportunity to buy and be waited upon in the order of arrival. In a line at the theater Mrs. Gotrocks is no better than anyone else."

While there is merit in the thesis that a strain of equality in a culture is related to the orderliness of public behavior, it would seem that egalitarianism alone does not explain respect for priority in queues. Consider the English, a people famous for their strictly democratic queueing behavior. It is safe to say that the English have a more rigid social structure and are more class conscious than Americans, and yet their public behavior is probably more orderly. The relationship between cultural equality and public orderliness is attenuated in the area of queueing because waiting in line is not a habit of all social classes in Western society. It is reasonable to suppose that if Mrs. Gottrocks joined a theater or a football line in the United States, Australia, or England, she would not be treated differently than anyone else, but it would be a rare event for someone of Mrs. Gottrocks's status to use a line. Ordinarily, in both class-conscious and relatively class-free societies, the privileged classes circumvent the line altogether and get their tickets through agents or other contacts. Our point, then, is that queueing is confined largely to the less-privileged groups in society. It might be more accurate to speak of a subcultural value of equalitarianism in public behavior.

In his recent book, *The Hidden Dimension*, Hall (1964) continues his examination of the basis of public behavior and makes the assertion that respect for queues can also be attributed to a cultural value of orderliness. Presumably, culture patterns in different societies emerge on a continuum of order-disorder, and, like the value of equality, a strain of orderliness runs through life in a society.

One difficulty with the orderliness hypothesis is that the principle of queueing is not always maintained in situations where there are no officials or police present to scrutinize and control the outbursts of unruly behavior. Only if the principle is supported religiously under these conditions, can one speak of a culturally ingrained disposition toward orderliness.

In brief, to seek an explanation for organized cooperative behavior in queues, we cannot appeal only to cultural values of egalitarianism and orderliness. Answers must also be sought with reference to the queue as a social system in which these values often receive only token or symbolic acknowledgment. The main concern of the queue membership is maintenance of a state of control and order while the system moves toward its goal. Indeed, values of orderliness, egalitarianism, and distributive justice are invoked to help maintain that order, but they are primarily used and

modified to make life in the queue tolerable, rather than obeyed in a rigid and mechanical manner.

CONCLUSION

This paper described how patterned regularities in behavior and attitudes emerge to regulate life in an overnight football queue. Although arrangements made to control behavior in the queue are informal, they are clearly identifiable, and it is appropriate to regard them as constituting a kind of culture. The queue, which possesses the characteristics of a social system, attempts to solve the set of functional problems confronted by every social system.

Our major findings were: (*a*) the growth of a queue tradition in which large numbers of people return annually to share the experience of waiting for tickets overnight in the open; (*b*) an increasing professionalization of the queue, marked by an influx of speculators and middlemen who profit by the increased demand for tickets; (*c*) the formation of unofficial pre-queues to recognize the priority of people who arrived before the start of the official queue; (*d*) elaboration of the principle of first come, first served to control the amount of time spent in and out of the queue ("shift" and "marker" systems, which control "time-outs," were developed to regulate leaves of absence from the line); (*e*) social constraints, and less often physical constraints, used to control queue jumping and to govern the practice of place keeping.

It is appropriate to conclude that queueing behavior, a neglected area of social research, could be a rich source of ideas for students of crowd behavior, judgmental processes, cross-national differences, and the influence of cultural values on public behavior.

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Continuities in Research on the "Religious Factor"

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Analysis of the attitudes and behavior of graduates of Catholic colleges seven years after graduation indicates that the experience of attending a Catholic college caused no economic, educational, or intellectual handicaps for the alumni of such schools. They are also likely to score higher than other Catholics on measures of religious behavior and on measures of political and social liberalism.

The purpose of this brief note is to report on certain continuities in research on the question of the influence of religion and religious education on adult attitude and behavior. Among the relevant publications are those by Greeley (1963*a*, 1963*b*), Greeley and Rossi (1966, chap. 5), Knapp and Goodrich (1952), Knapp and Greenbaum (1953), Lenski (1960, 1965), O'Dea (1958), Warkov and Greeley (1966), and Warwick (1963).

Three major conclusions about the impact of the Roman Catholic educational system in the United States can be drawn from previous research: (1) Those who attended Catholic schools are more likely to be religious in adult life than those who did not, even when the religiousness of the family of origin is held constant; (2) there is no evidence of economic, educational, or intellectual handicaps affecting those who have attended Roman Catholic schools; and (3) those who have attended Roman Catholic colleges seem more politically and socially liberal than those Catholics who did not attend such colleges, particularly if the former had also attended Catholic grammar school and high school.

However, there were a number of weaknesses in the data gathered in earlier studies. The sample interviewed by Greeley and Rossi in their *Education of Catholic Americans* (1966) was made up of adult Catholics between twenty-three and sixty years old. Many of the older respondents in the sample were immigrants or the children of immigrants, and the impact of Roman Catholic schools on them might have been very different from the impact on younger and more assimilated Catholics. Furthermore, the major social class differences between the older immigrants and the younger assimilated Catholics could easily be blurred in a national sample of the adult population.

The other major data concern June 1961 college graduates and labor under two sets of weaknesses: First of all, the graduates filled out their questionnaires in the years immediately after graduation from college, when the influence of the college experience might still have been very strong on them. Second, there were no questions about political or social attitudes which would enable researchers to examine in greater detail, with a larger

sample, the conclusion about the greater liberalism of the graduates of Catholic colleges reported by Greeley and Rossi with a relatively small number of respondents.

However, the fifth phase of the National Opinion Research Center's (NORC's) ongoing study of June 1961 college graduates (commissioned in this instance by the Carnegie Foundation Commission on the Future of Higher Education) makes it possible to reexamine the conclusions of previous research in a sample that is adequate in size, youthful in age, and similar in social class (as all are college graduates). In addition, measures of political and social attitudes were included in the study so that the third and most dubious conclusion of previous research could be more carefully investigated.

Those who have attended Catholic schools are more religious seven years

TABLE 1

RELIGIOUS BEHAVIOR AND EDUCATION OF CATHOLICS IN 1968 (PERCENTAGE JUNE 1961 COLLEGE GRADUATES)

	Catholic Education				
Item	All Catholic	Catholic College Only	Catholic Primary Only	Catholic Primary and Secondary	All Non-Catholic Education
Percentage still Catholic...	96	93	91	92	84
Percentage in Catholic marriage..................	87	59	77	79	77
Percentage attending church weekly............	81	83	71	70	52
Weighted N............	459	132	235	101	449

after they have graduated from college than those who have not attended Catholic schools (table 1); almost any attendance at Catholic schools correlates with remaining in the Church, while attendance at a Catholic college is positively correlated with frequent church attendance. But, curiously enough, those who went to Catholic colleges without attending Catholic grammar schools or high schools are the most likely of all to enter religiously mixed marriages—perhaps because they come from sections of the country where the Catholic population is not large. Even for the younger Catholic population, there remains a positive relationship between Catholic education and religious behavior in adult life

Catholic education does not seem to interfere with educational or financial success or with the choice of an academic career (table 2). The Catholics who had all their education in Catholic schools are twice as likely as those who had all their education in public schools to have either a terminal professional degree or a Ph.D. They are also considerably more likely to have such a degree than the non-Catholic respondents in the survey. Only those Catholics who went to Catholic colleges without attending Catholic gram-

mar schools and high schools are less likely to have a terminal degree than the typical 1961 alumnus. Furthermore, the respondents who received all their education in Catholic schools are also the most likely to have the arts and sciences Ph.D. and the most likely to be working for a college or university or for a research organization, though the differences among the six groups are too small to be important.

Those who had all their education in Catholic schools are more likely to score high on the reading index[1] than are any other respondents in the sample, although Catholics with partial Catholic education score lower on this measure than do non-Catholic respondents.

Finally, with the exception of those who went to Catholic colleges after public grammar school and high school, there is a positive relationship between Catholic education and earning more than $11,000 per year.

TABLE 2

CATHOLIC EDUCATION AND ACHIEVEMENT IN 1968
(PERCENTAGE JUNE 1961 COLLEGE GRADUATES)

Education and Achievement	Catholics					Non-Catholics
	All Catholic	Catholic College Only	Catholic Primary Only	Catholic Primary and Secondary	All Non-Catholic Education	
Ph.D. or professional degree..	18.0	10.0	15.0	14.0	9.0	12.0
Ph.D..	5.8	0.0	2.1	1.9	3.7	3.8
Earning more than $11,000...	37.0	27.0	40.0	45.0	32.0	27.0
High on reading scale.......	28.0	18.0	19.0	7.0	16.0	23.0
Choosing academic careers ..	29.0	20.0	17.0	13.0	19.0	27.0
N	459	132	235	101	449	6,289

Thus, there is no evidence that attending Catholic schools interferes with one's intellectual, educational, or financial achievement—quite the contrary. If anything, Catholic school attendance seems positively to facilitate such achievements. It may be that those who have attended Catholic schools come from families where there was more emphasis on upward mobility and educational achievement than there was in other families (a curious reversal of the Protestant ethic). It also may be, as Greeley and Rossi (1966) suggested, that they are more successful because, in Rosenberg's terms, they enjoy greater "emotional well-being" inside the subculture than they would outside the subculture. Finally, it may also be that the faculty and administrators of Catholic colleges, in particular, put strong emphasis on academic and economic achievement in the training of their students. There is some evidence of this (see Greeley 1963*b*). However, it now seems quite clear that the suggestion of Lenski (1960), Trent (1967), and others,

[1] Based on reported ownership of books and frequent reading of nonfiction and poetry.

that the rather surprising scores of Catholics on measures of "intellectualism" in NORC's June 1961 sample was a function of great aspirations that would not be carried to fulfillment, must be definitively rejected. The graduates of Catholic colleges, in particular, cannot be written off as "anti-intellectual."

But the most striking data to be reported in this note may be observed in table 3. Attendance at Catholic college, particularly after attendance at Catholic grammar school and high school, correlates quite strongly with liberal, not to say radical, political positions. Those who have attended Catholic colleges (independent of their primary and secondary education)

TABLE 3

SOCIAL ATTITUDES AND CATHOLIC EDUCATION IN 1968
(PERCENTAGE JUNE 1961 COLLEGE GRADUATES)

	Catholics					
Social Attitudes	All Catholic	Catholic College Only	Catholic Primary Only	Catholic Primary and Secondary	All Non-Catholic Education	Non-Catholics
Percentage liberal Democrat..	23	36	17	14	18	16
Percentage thinking Negro protests healthful for America..............	63	68	53	47	53	53
Percentage blaming riots on white racism..........	47	41	33	28	33	33
Percentage supporting student political involvement......	31	16	21	24	23	28
Percentage supporting student militancy...............	29	20	17	13	19	27
N......................	459	132	235	101	449	6,289

are more likely to describe themselves as liberal Democrats, though the differences on this item are much less striking than they are on the other four items of the table. Those who attended Catholic colleges are considerably more sympathetic to black militants and also substantially more likely to accept the conclusion of the Kerner report that riots are caused by white racism. Even more surprisingly, those who have attended Catholic colleges after Catholic grammar school and high school experience are far more sympathetically disposed toward student militancy than are other Catholics who have graduated from college, and they are slightly more favorably disposed toward militancy than the typical American college graduate.

The conclusion, therefore, of the Greeley-Rossi report, that the graduates of Catholic colleges are more socially liberal than either Catholics who went to non-Catholic colleges or the general population, seems to be confirmed. Differences between the graduates of Catholic colleges and all others on items measuring racism may not be surprising, for the Roman Church

in recent years has taken a strong theoretical stand on the race issue; but that those who had all their education in Catholic schools would be more sympathetic to student militancy than other Catholics is not so easily explained. One might suggest that the reason for their support of militancy is that they were dissatisfied with their own college education, but other data to be reported elsewhere would indicate that exactly the opposite was the case.

Another possible explanation is that there is a strong relationship between Irish ethnic background and attendance at Catholic schools and that Irish Catholics tend to be more liberal than the other three major ethnic groups, but a good deal of this difference vanishes among college graduates.

It may be possible that there is some sort of preselection factor at work. Catholics with more liberal political and social inclinations may selectively overchoose to attend Catholic colleges; but if this were true—and there is some slight indication of this in yet unpublished material by other writers—the mystery would be even deeper: why would politically and socially liberal Catholics be more likely to choose to go to Catholic colleges, especially when such colleges do not have a reputation for political and social liberalism?

No definitive conclusions, therefore, can be reached as to the reason for this apparent greater liberalism among the graduates of Catholic colleges until more detailed research becomes feasible on attitudinal trends through the four years of college experience. It might be suggested that, as a tentative hypothesis for investigation, the faculty of Catholic colleges, particularly the younger members of the religious orders, have strong commitments to certain kinds of social liberalism and push these commitments perhaps a bit more strongly than do the younger faculties of typical American colleges.

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Race Awareness among American and Hong Kong Chinese Children

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Research with young children in the United States, New Zealand, and South Africa has indicated that children of subordinate races tend to prefer and identify with members of dominant races, while children of dominant races tend to prefer and identify with members of their own race. To test this generalization in a setting which, while multiracial, does not have subordinate-dominant relations, the author measured race awareness in Chinese children in Hong Kong and compared the results with race awareness in American Caucasian and Negro children. The findings gave support to the generalization and also to the normative theory of racial prejudice.

The awareness of race in young children has been studied in several societies, including the United States, New Zealand, South Africa, and England. These studies have differed somewhat in the types of measuring instruments used and in the aspects of race awareness considered. However, each of them has shown that the pattern of race awareness is related to the structure of race relations and to the social norms underlying the structure. Specifically, from the studies in at least three of the societies, the following general finding relating race awareness to social structure has emerged: *In a multiracial society in which there is a dominant and a subordinate race. young children of the subordinate race tend to prefer and identify with members of the dominant race, while children of the dominant race tend to prefer and identify with members of their own race.*

Evidence in the United States for this generalization has come from research showing that American Negro children of preschool age prefer and identify with Caucasians and that American Caucasian children also prefer and identify with Caucasians. Among these studies are those of Clark and Clark (1947), who used dolls; Goodman (1946, 1964), who used drawings, puzzles, and direct observation; Stevenson and Stewart (1958), who used doll assembly, figure discrimination, and incomplete stories, Williams and Robertson (1967), who employed a color-meaning picture series with an adaptation of a semantic differential test; and Morland (1958, 1962, 1963*a*, 1963*b*, 1966), who used sets of photographs. One American study takes partial exception to these rather consistent findings. Greenwald and Oppenheim (1968), using a modification of the Clark doll test, raised a question about the validity of one measure of Negro self-identification; however, they tended to support previous findings about racial preference and did not challenge other findings on American Negro self-identification. In New Zealand, Vaughan has compared the responses of

Caucasian and Maori children through the use of pictures and dolls and has found that the Maori were significantly less likely to favor their own race than the Caucasians were to favor theirs (Vaughan 1963*a;* 1963*b;* 1964*a;* 1964*b*). Research in South Africa was done by Gregor and McPherson (1966) with the Clark doll test. They found that Bantu children tended to prefer and identify with Caucasian dolls and that South African Caucasian children also tended to prefer and identify with Caucasian dolls. In England, research by Pushkin with Caucasian and Negro children, using line drawings and doll play, found that ethnic attitudes were related to social characteristics of areas in London. However, the article in which this was reported (Jahoda, Veness, and Pushkin 1966) gave only preliminary conclusions on this research.

Two elaborations of the generalization relating race awareness to social structure are present in the research cited above. The data from South Africa show that as far as numbers are concerned the dominant race need not be as large as the subordinate, for Caucasians, the dominant race, make up only about one-fourth of the population. There are also indications from Vaughan's (1963*a*, pp. 100–102) research in New Zealand and from my research in this country (Morland 1962, pp. 279–80) that young children learn to prefer and identify with the dominant race before they develop the ability to employ racial terms accurately in differentiating between the races. This can be interpreted to mean that these attitudes are learned indirectly, rather than through direct instruction that employs the names of the races.

A STUDY OF HONG KONG CHINESE CHILDREN

One way to test the generalization about the relationship between race awareness and the presence of dominant and subordinate races would be to study the nature of race awareness in a multiracial setting in which no race was clearly dominant. Such a study could, incidentally, act as a check on the normative theory of racial prejudice, about which more will be said later. It could be assumed that in this sort of setting there would be a different pattern of race awareness from that cited above, since the social structure in regard to race relations and the norms supporting that structure would be different. I sought to test this assumption by measuring the race awareness of young Chinese children in Hong Kong in the spring of 1967 and comparing the findings with those I obtained in the United States.[1]

The Hong Kong Setting

The British acquired the island of Hong Kong in 1842, when it was inhabited by only a few fishermen. To the island was added the peninsula of Kowloon in 1860 and the New Territories in 1898, completing the almost

[1] A year's residence in Hong Kong was made possible by a grant under the Mutual Educational and Cultural Exchange Act of 1961 (Fulbright-Hays Act) and a sabbatical leave from Randolph-Macon Woman's College. The Chinese University of Hong Kong, at which I taught, offered valuable assistance with the research project.

400 square miles that compose the Colony today. The population has in creased to nearly 4 million, 98 percent of whom are Chinese. The others i the population are mostly British, but there are also Americans, Asiati Indians, and a variety of other nationalities present. Approximatel 500,000 tourists, most of whom are Caucasian, visit Hong Kong each yea In the Hong Kong setting neither the Chinese nor the Caucasian rac (represented mainly by the British) is dominant. The British hold to government posts, it is true, and they head a number of important bus nesses. Also, most of the foreigners in Hong Kong are relatively affluen However, the Chinese are also prominent in business, education, govern ment, social life (including the most prestigious clubs), and a number o them are very wealthy. Also, the Chinese reputedly have deep pride i their nation and in their cultural heritage, a pride evidently shared by th Chinese in Hong Kong. The most appropriate description of the socia structure of the Colony is one in which the Caucasians and Chinese migh be said to hold parallel positions. The Colony is officially bilingual; there i no racially based exclusion of any sort; all schools in which English is th chief mode of communication are "integrated"; one of the two televisio channels is English, the other Chinese; the more than ninety movie theate show a wide variety of Chinese, British, and American films; there are thre English-language newspapers and a dozen or so papers in the Chines language.

Measuring Instrument

In order to provide a valid comparison of the race awareness of Hong Kon Chinese children with American children, the equivalent of the author' photograph-interview test used in the United States was constructed. Si photographs of Caucasians and Negroes used in the United States wer matched with six photographs of Chinese and Caucasians. These photo graphs were made by professional photographers in Hong Kong, and th models as well as the final pictures were selected by the author and hi nineteen Chinese students in a social anthropology class at the Chines University of Hong Kong. The six photographs depicted: (1) four Chines children, two boys and two girls, sitting around a table, drawing pictures (2) four Caucasian children, two boys and two girls of the same age and siz as the Chinese models, at the same table, drawing pictures; (3) four men two Caucasian and two Chinese, drinking tea; (4) six women, three Cauca sian and three Chinese, drinking tea; (5) four girls, two Caucasian and tw Chinese, playing with dolls; (6) four boys, two Chinese and two Caucasian playing with toys.

The set of English questions used in the picture-interview with the Ameri can children was translated into Chinese through the following procedure The author's nineteen Chinese students, all of whom had studied Englis for at least eight years, first made separate and independent translations from which they worked out a consensus of the most accurate Chines

translation. The author then had this Chinese version of the interview checked for accuracy by a Chinese faculty colleague who knew English well.

The Subjects

Responses were obtained from 319 Chinese children of ages 4, 5, and 6 in four schools. All of the children of these ages who were present on the days of testing were interviewed, the only selection being on the basis of age. Two of the schools were for privileged children and two for poor families living in resettlement flats built by the government. This difference in socioeconomic level made it possible to analyze the responses by socioeconomic status to see if such status was related to race awareness. There is, of course, no claim that these 319 children are representative of all Chinese children of these ages in Hong Kong. However, since all of them were born in the Colony, it can be assumed that their awareness of race is derived from the socialization process generally experienced by the Chinese children of Hong Kong. The picture-interviews were conducted in March and April 1967 by twelve of my Chinese students who had been trained by me.

A COMPARISON OF HONG KONG AND AMERICAN CHILDREN

In order to compare the race awareness of children in the Hong Kong and U.S. settings, three racial groupings were formed: American Caucasian, American Negro, and Hong Kong Chinese. One hundred and fifty children in each grouping were matched by age,[2] and in the two American groupings the number of children from the North and from the South was the same.[3] These American children had been tested by me and my students during 1964, 1965, and 1966 in Hartford, Bloomfield, and East Granby, Connecticut, and in Lynchburg and Prince Edward County, Virginia.

The set of photographs and the questions asked about them were designed to measure racial acceptance, racial preference, and racial self-identification. The results of each of these measures will be presented in turn.

Racial Acceptance

To find the willingness of the subjects to play with children of their own race and those of the other race, each was given three chances to say if he would like to play with groups and with individuals of both races: in Pic-

[2] The age distribution for each grouping was: 66 four-year-olds, 57 five-year-olds, and 27 six-year-olds. Age was controlled in the comparison, for studies of race awareness have generally found it to be significantly related to most aspects of race awareness.

[3] In comparing race awareness in northern and southern American children in an earlier report I found that Negro subjects differed significantly by region on one of seven measures and that Caucasian subjects differed significantly by region on two of seven measures (Morland (1966). Hence this control of region was introduced. It might be added that southern subjects differed significantly by race on six of seven measures and that northern subjects differed by race on four of seven measures.

tures 1 and 2 (groups), Picture 5 (girls), and Picture 6 (boys). Color and race were not mentioned in these questions, which asked, "Would you like to play with these children [or with this child]?" followed by "Why?" or "Why not?" The responses of a subject were scored as "Acceptance" if he indicated a majority of times that he would like to play with those in question, "Nonacceptance" if he said most frequently he would not like to play with them for any reason other than racial, and "Rejection" if he said most often he did not want to play with them because of their race. Almost all of the subjects in the three groupings accepted members of their own race, with no significant difference among the three, as can be seen in table 1. These results show that this form of racial self-acceptance is evidently not related to the differences in the social structures of Hong Kong and the United States. However, table 2 indicates that American Negro acceptance of the dominant race was higher than American Caucasian acceptance of the subordinate race or of Hong Kong Chinese acceptance of members of the parallel race. On the other hand, the Chinese and the Caucasian children did not differ significantly. It is to be noted that the great majority of children in both of the sociocultural settings accepted

TABLE 1

ACCEPTANCE OF OWN RACE BY AMERICAN CAUCASIAN, AMERICAN NEGRO, AND HONG KONG CHINESE CHILDREN

Racial Grouping (*N* for Each =150)	Acceptance of Own Race (%)	Nonacceptance of Own Race (%)	Rejection of Own Race (%)
American Caucasian......	95 3	4.7	0.0
American Negro...	89 3	10.7	0 0
Hong Kong Chinese	89.3	10 7	0.0

TABLE 2

ACCEPTANCE OF OTHER RACE BY AMERICAN CAUCASIAN, AMERICAN NEGRO, AND HONG KONG CHINESE CHILDREN*

Racial Grouping (*N* for Each =150)	Acceptance of Other Race (%)	Nonacceptance of Other Race (%)	Rejection of Other Race (%)
American Caucasian......	81 3	14 7	4.0
American Negro†.........	95 3	4 7	0 0
Hong Kong Chinese.......	75 3	23.3	1.3

* "Other Race" for Caucasian is Negro; for Negro is Caucasian; for Chinese is Caucasian.

† Significantly different from other two groupings at .001 level, by χ^2 test, with "Nonacceptance" and "Rejection" combined.

hildren of the other race, with very few of them rejecting those of other aces explicitly because of race.[4]

Racial Preference

mmediately following the questions about acceptance of one's own and of he other race, the subjects were asked to indicate a preference between the wo races. Again, the interviewer did not mention race or color, but pointed o the picture and asked, "Would you rather play with these children [this hild], or with those [that one]?" He was asked to choose between groups f the two races (Pictures 1 and 2), among girls of the two races (Picture 5), nd among boys of the two races (Picture 6). Replies were scored as "Prefer Own Race," "Prefer Other Race," or "Preference Not Clear," depending

TABLE 3

RACIAL PREFERENCE OF AMERICAN CAUCASIAN, AMERICAN NEGRO, AND HONG KONG CHINESE CHILDREN*

Racial Grouping (*N* for Each = 150)	Prefer Own Race (%)	Prefer Other Race (%)	Preference Not Clear (%)
American Caucasian†	82 0	12.0	6 0
American Negro†	28 0	53 3	18 7
Hong Kong Chinese†	65.3	25.3	9.3

* American children chose between Caucasian and Negro, Hong Kong children chose between Caucasian and Chinese.

† Significantly different from each of other two groupings at the .001 level, by the χ^2 test.

n the most frequent answer. Table 3 shows that all three groupings liffered significantly. However, a majority of the Caucasian and Chinese hildren preferred their own race, while a majority of Negro children preerred the other race.

The preference of the Negro respondents can be interpreted to mean that s members of the subordinate race they reflect the bias for Caucasians that haracterizes American society.[5] A plausible interpretation of the difference etween the American Caucasian and Hong Kong Chinese subjects is that ace differences carry more importance for status in a multiracial society

Categorizing answers as either "Rejection" or "Nonacceptance" was based on the reponse to the question, "Why not?" asked after the subject had indicated that he did ot want to play with the children or the child depicted. The responses of two Chinese who said they did not want to play with the Caucasians in the pictures, "because I do ot like Western children," were categorized as "Rejection." However, the responses of wo Chinese that they did not want to play with the Caucasian children, "because I o not know their language," were categorized as "Nonacceptance." Obviously, such ategorization poses difficulties, although it is nonetheless important.

I have elaborated on this interpretation elsewhere (Morland 1958, p. 137; 1963*b*, . 240). Vaughan makes a similar interpretation for the New Zealand children (1963*b*, . 69).

that has dominant and subordinate races than they do in a society in which races have parallel positions. It is to be noted that in both societies preference for one race did not mean rejection or nonacceptance of the other race (including one's own race) when no choice was involved. As was shown earlier (tables 1 and 2), the great majority of respondents accepted both their own and the other race.[6]

Racial Self-Identification

In learning racial categories recognized by his society, a child not only learns this in regard to others but also in regard to himself. To measure aspects of racial self-identification, subjects were asked which children in the pictures they look most like and which children they would rather be. Table 4 summarizes the responses to the first question, and table 5 summarizes responses to the second. In both types of self-identification, American Caucasian subjects clearly identified with their own race. In contrast, the American Negro children tended to identify with Caucasians. About the same proportion of Negro subjects said they looked like Caucasians in the pictures as said they looked like Negroes in the pictures, and almost two-thirds of the Negro respondents said they would rather be one of the Caucasians than one of the Negro children. The Hong Kong data are not so consistent. Although more than twice as many Chinese children said they looked more like the Chinese than like the Caucasian children in the pictures, exactly one-half of them were not sure or insisted that they looked no

TABLE 4

RESPONSES OF AMERICAN CAUCASIAN, AMERICAN NEGRO, AND HONG KONG CHINESE TO THE QUESTION, "WHICH CHILD DO YOU LOOK MOST LIKE?"*

Racial Grouping (*N* for Each = 150)	Most Like Child of Own Race (%)	Most Like Child of Other Race (%)	Not Sure, or Did Not Know (%)
American Caucasian†	76.7	12.0	11.3
American Negro†	46.7	45.3	8.0
Hong Kong Chinese†	36.0	14.0	50.0

* American children chose between Caucasian and Negro; Hong Kong children chose between Caucasian and Chinese.

† Significantly different from each of the other two groupings at the .001 level, by the χ^2 test.

[6] Some studies which have not measured acceptance of one's own and of other races when no choice was involved have assumed that preference for one race implied rejection of the other (e.g., Clark and Clark 1947, p. 175). The results of tables 1, 2, and 3 above also suggest that the type of question which forces the respondent to characterize one of dolls or pictures in an unfavorable way (e.g., in the Clark doll test, saying "Give me the doll that looks bad") might be rephrased, by asking *if* one of the dolls actually looks bad. Such rephrasing was done by Greenwald and Oppenheim (1968, pp. 49–50).

›re like one than they did the other. On the other hand, over one-half of e Chinese subjects said they would rather be one of the Chinese than one the Caucasian children.

Differences between the American Negro and Caucasian responses can ain be explained in terms of the effects of the privileged position of Cau- ɜians in the society and the consequent identification, probably un- ıscious, of the Negro subjects with the dominant race.

ıcial Recognition Ability

lditional understanding of variations in racial self-identification among e American and Chinese subjects can be gained by looking at the results the measure of racial recognition ability. After the subjects had been own each of the pictures and were asked questions that did not mention

TABLE 5

RESPONSES OF AMERICAN CAUCASIAN, AMERICAN NEGRO, AND HONG KONG CHINESE CHILDREN TO THE QUESTION, "WHICH CHILD WOULD YOU RATHER BE?"*

Racial Grouping (*N* for Each = 150)	Rather Be Child of Own Race (%)	Rather Be Child of Other Race (%)	Not Sure, or Did Not Know (%)
American Caucasian†	76.7	14.7	8 7
American Negro†	33.3	62.0	4.7
Hong Kong Chinese†	54.0	28.0	18.0

* American children chose between Caucasian and Negro; Hong Kong children chose between Caucasian and Chinese.

† Significantly different from other two groupings at .001 level, by χ^2 test.

ce in any way, they were shown the pictures again and asked to identify e race of those depicted. The American children were asked, for each cture, if they saw a white person to point to him, and if they saw a colored ɪrson or a Negro to point to him.[7] For the Hong Kong subjects, the terms ɪed to test recognition ability were "Chinese" and "Westerner."[8] A child ıs scored "High" if he answered correctly each time or if he missed not orc than twice; he was scored "Low" if he missed more than twice.[9] As a

'he term "colored" was used first, and if the respondent knew this term, "Negro" ıs not used. But if he did not know "colored," he was asked to point to a Negro in the ɔture. "Colored" was found to be better known than "Negro" from preliminary testing.

['he term "Westerner" was decided upon after pretesting Chinese children. If the re- ondent did not know "Westerner," the interviewer then used the term *yang kuei-tse,* ıich means "foreign devil" or "foreigner." The latter is evidently more often employed ' lower than by upper status Chinese.

['his cutting point was derived from an earlier study of mine in which the validity and liability of racial recognition were tested (Morland 1958, p. 134).

rule, a child obviously either knew the terms and was correct each time or he did not know what they meant and missed consistently.

It can be seen from table 6 that American Caucasian children demonstrated a significantly higher racial recognition ability than either the American Negro or Hong Kong Chinese children and that the Negro and Chinese children made similar scores on recognition ability. However, replies to an additional question, asked at the end of the interview about the race to which the subject himself belonged, showed quite different results for the American Negro and the Hong Kong Chinese children. Table 7 compares the replies of those who scored "High" in recognition ability, since it can be assumed that only these children knew the meaning of the racial terms employed. Almost all of the Hong Kong Chinese who scored "High" replied that they were Chinese, and almost all of the American Caucasians who scored "High" said that they were white. However, only about two-

TABLE 6

RACIAL RECOGNITION ABILITY OF AMERICAN CAUCASIAN, AMERICAN NEGRO, AND HONG KONG CHINESE CHILDREN*

Racial Grouping (N for Each = 150)	High Ability (%)	Low Ability (%)
American Caucasian†	70.7	29.3
American Negro	49.3	50.7
Hong Kong Chinese	48 7	51.3

* American children are measured on their ability to point out "white" and "colored" (or "Negro") persons; Hong Kong children on their ability to point out "Chinese" and "Western" (or "foreign") persons.

† Significantly different from the other two groups at the .001 level, by χ^2 test.

TABLE 7

RESPONSES OF AMERICAN CAUCASIAN, AMERICAN NEGRO, AND HONG KONG CHINESE CHILDREN OF HIGH RACIAL RECOGNITION ABILITY TO THE QUESTION ASKING TO WHAT RACE THEY BELONGED*

Racial Grouping of Children of High Recognition Ability	Member of Own Race (%)	Member of Other Race (%)	Reply Not Clear (%)
American Caucasian (N = 106)	97.2	1.9	0.9
American Negro† (N = 74)	68.9	25.7	5.4
Hong Kong Chinese (N = 73)	97.3	2.7	0.0

* American children were asked, "Are you white, or are you colored [or are you a Negro]?"; Kong Kong children were asked, "Are you a Chinese, or are you a Westerner [or are you a foreigner]?"

† Significantly different from the other two groupings at the .001 level, by the χ^2 test, with "Member of Other Race" and "Reply Not Clear" combined.

ds of the Negro subjects scoring "High" said that they were members of r own race, and one-fourth said that they were white. These results show , the American sociocultural milieu makes it difficult for a Negro child ccept his racial identity, probably because of his unconscious desire to dentified with the privileged race. However, children of the dominant in America and of a parallel race in Hong Kong are similar in learning in accepting their racial designation. It might be added that the owledgment of racial membership was not easy for the American Negro ects. When asked to what race they belonged, a number of Negro dren answered reluctantly and with obvious discomfort.[10] On the other d, the American Caucasian and Hong Kong Chinese subjects gave their al membership readily and with ease.

IATIONS BY SOCIOECONOMIC STATUS

rder to find out if the responses of the groupings were related to socio-omic variations, additional analysis was made by comparing upper lower status subjects within the groupings. Thus, on each of the seven sures, with the factor of age controlled, upper and lower status Cau-ans, upper and lower status Negroes, and upper and lower status nese were compared. Although status was determined somewhat dif-ntly in the three groupings, it was felt that this analysis by status could some indication of the consistency of response within each grouping therefore of the comparability of the groupings themselves.

merican Caucasians were divided into upper and lower status categories he basis of parental occupation and residential location (see Morland 3, p. 132; 1962, p. 272). Upper status subjects attended suburban, ate nursery schools, and their parents were in professional and man-ial occupations. Lower status subjects were in publicly supported day-centers, and their fathers as well as their mothers were mostly semi-led or unskilled laborers. In matching by age some cases had to be arded, so that sixty-eight lower status were compared with sixty-eight er status Caucasians. The Chinese subjects, as indicated earlier, differed tatus primarily on the basis of the type of school attended. There were tly more upper than lower status Chinese subjects among the 150, and n matched by age there were fifty-six in each of the status categories. erican Negro subjects attended less socioeconomically homogeneous ols, as a rule, and upper and lower status divisions were determined rely by parental occupation. Those categorized as upper status had nts who were teachers or doctors or in clerical jobs; lower status sub-

1 example of this is the reaction of a five-year-old Negro girl of high recognition ty in Hartford, Connecticut. When asked, "Are you white or are you colored?" she rst responded, "I'm colored." But, then, with strong feeling, she added: "No I'm I'm white. I wanna be *big!*" Similar reactions of American Negro children have been rted by Clark and Clark (1947, p. 178); Goodman (1946, p. 626); and Trager and ow (1952, p. 143). Consequences of this difficulty in the acceptance of racial identity legro children have been discussed by Ausubel and Ausubel (1963) and by Meeks 7).

jects had parents who were laborers or domestic workers. There were fewer upper than lower status Negroes in the 150 subjects so that, after matching by age, forty cases remained in each status category for comparison.

Three significant variations by socioeconomic status were found within the Caucasian grouping: more lower than upper status Caucasians accepted Negroes, showed a preference for Caucasians, and indicated they would rather be Caucasian (cf. Morland 1962, pp. 276, 278; 1963*b*, p. 237). However, these variations did not affect the overall type of responses for these measures, for a large majority of both upper and lower status Caucasians accepted Negroes, preferred Caucasians, and would rather be Caucasian, in conformity with the data of tables 2, 3, and 5 above. Also, when either upper or lower status Caucasians were compared with the other two groupings, there were no significant differences in the direction of responses from those of tables 2, 3, and 5.

There were no significant variations by status among American Negro subjects in any of the measures. There was a tendency for more upper than lower status Negroes to have higher recognition ability and to identify more often with Caucasians, but none of these differences was significant at the .05 level.

Upper and lower status Chinese differed in the manner of response to the questions on preference, on which race they looked most like, and on which race they would rather be. While the number preferring and identifying with the Chinese in the pictures was almost the same, more upper than lower status subjects gave answers in the "Not Sure" category, and more lower than upper status subjects preferred and identified with Westerners However, when the "Not Sure" category was combined, in turn, with the "Prefer Westerner," the "Look Most Like Westerner," and the "Rather Be Westerner" categories, the differences were not significant at the 05 level. The only clear-cut significant difference between upper and lower status Chinese was in recognition ability; upper status subjects had a higher ability than lower status. In fact, this is the only measure in which the pattern of the responses of the groupings was affected by status, for the upper status Chinese did not differ significantly from the American Caucasians in this ability, in contrast to the overall finding of table 6. However, upper status Chinese of high recognition ability did not differ significantly from lower status Chinese of high ability in response to the question, "Are you a Chinese, or are you a Westerner?" Almost without exception, both upper and lower status Chinese replied that they were Chinese, in conformity with the data of table 7. Although differences by status are evidently important (and more will be said about this later), the pattern of responses continues to hold across status variations

CONCLUSIONS

This comparison of American and Hong Kong Chinese children upholds the assumption that race awareness varies with the social structure, for it reveals a different pattern of race awareness in a society with dominant and

subordinate races from that in a society with parallel races. Furthermore, the pattern of response was not affected by status variations within the three groupings. The findings show that Hong Kong Chinese children differed significantly from both the American Caucasian and American Negro children on racial preference and on two measures of racial self-identification. The Hong Kong children, unlike the American Negro children, preferred and identified with members of their own race. In this way they were like the American Caucasian children, who also preferred and identified with their own race. However, the extent of such preference and identification among the Hong Kong children was significantly lower than among the American Caucasians. This pattern of response of the Hong Kong children in preferring and identifying with their own race in a less extensive way than American Caucasian subjects but in a more accepting way than American Negro subjects could be logically expected in a society with races in parallel positions. In such a society there is no dominant race to maintain its superior position and no subordinate race to show unconscious preference for and identification with the dominant race.

The study of race awareness among the Hong Kong Chinese children questions an interpretation of the research cited at the beginning of this paper that shows that members of the subordinate race tend to prefer and identify with members of the dominant race. This interpretation is derived from findings on the connotation of color in several societies in which the color "white" has a highly favorable evaluation, while the colors "black" and "brown" have unfavorable evaluations. Such evaluations have been found in the United States (among Negroes as well as among Caucasians), in Germany, in Denmark, in India, and in Hong Kong.[11] Thus, the preference for and identification with the lighter-skinned dominant race by the darker-skinned subordinate race in the United States, South Africa, and New Zealand cited earlier in this paper, might be the result, not of social structure, but of a universal human bias for that which is "light" as opposed to that which is "dark." The Hong Kong data on race awareness cast doubt on such an interpretation, for the Chinese children preferred and identified with the darker of the two races in the pictures, that is, with their own rather than with the Caucasian race.

The findings of this study can be interpreted as lending support to the normative theory of racial prejudice. This theory holds that such prejudice is a function of the norms of a society. As Westie has put it: "Prejudice is built into the culture in the form of normative precepts—that is, notions of 'ought to be'—which define the ways in which members of the group ought to behave in relation to members of selected outgroups" (1964, pp. 583–84). While the racial preference and identification reported reflect more of a racial bias than a racial prejudice (Morland 1962, p. 279), it is highly probable that such preference and identification are incipient in

[11] See, especially, the work of Williams (1964; 1966); Williams and Carter (1967), and Williams, Morland, and Underwood (in press). I have collected data on color connotations among Hong Kong Chinese and Asiatic Indian students. In these societies, of ten colors evaluated, "white" had the most favorable and "black" the least favorable rating.

prejudice and underlie it. And, pertinent to the normative theory, this comparison of Hong Kong and American children has shown that the patterning of race awareness is indeed different when the social structure and the norms supporting that structure are different. In turn, the normative theory helps to explain the findings of the research. If we take it for granted that children begin early in life to see differences in persons around them, the theory leads us to believe that they will consider these differences important only if their society makes them the basis of categorization and calls for a particular kind of response to those in the category. Thus, in a multiracial society, we assume that children can see variations in skin color, hair form, and the like. However, it is the society which determines how much attention is to be paid to these variations and whether or not certain groupings are to be recognized on the basis of selected characteristics. Furthermore, it can be assumed that it is in the socialization process that children learn not only what physical traits are used as a basis of classification but also what attitudes are to be held toward those in the classification.

There are several limitations to this comparison of American and Hong Kong children that point toward the need for further research. First, only one of the parallel races in Hong Kong was tested. The major reason for not testing Caucasian children was that their families are, for the most part, temporary residents of Hong Kong, assigned for specified periods of time and granted leaves to return to their "home" in England, the United States, Canada, or some other nation. While the Caucasian population of Hong Kong forms a continuous parallel race to the Chinese in one sense, the personnel of the Caucasian representation constantly changes, and, most important for the validity of comparison, the Caucasian children undergo the socialization process in their parents' home country as well as in Hong Kong. Additional testing of the generalization is needed in other sociocultural settings in which more than one race is present. Significant investigations could be made, for example, in societies in which members of the Negro race are dominant or at least are not subordinate. Such countries as Kenya, Liberia, Sierra Leone, and Zambia would provide fruitful sociocultural settings for research.

Second, the terms "dominant," "subordinate," and "parallel" are qualitative concepts that need to be more precisely defined and measured. If this were done, differences in the degree of dominance and subordination could then be related to differences in race awareness. Also, some consideration of the degree of "visibility" of different races should be made. It is possible to account for at least a part of the difference in the race awareness of American Caucasian and Hong Kong Chinese children through the greater contrast between the skin color of American Caucasian and American Negro than between the skin color of Chinese and Caucasian. Of course, it is to be remembered that this apparently greater visibility did not affect the responses of the American Negro subjects, at least as far as preferring and identifying with Caucasians were concerned. Present explorations of this factor of visibility are being made by me and my students by measuring the level of race awareness of American Caucasian children through the

use of pictures of Chinese and Caucasians, and by comparing the results with those obtained from pictures of Negroes and Caucasians. Also, the level of awareness of American Negro children is presently being measured by using pictures of all three racial groupings in the same test.

Although some control of age and socioeconomic status of the subjects was instituted in the research reported in this paper, more detailed comparisons of how children vary by age and by status could increase knowledge of the relation of social structure to race awareness. An elaborate proposal for such research in Britain has been made by Jahoda et al. (1966). Also, in order to ascertain the extent to which the socialization process involved in acquiring race awareness is deliberate and the extent to which it is nondeliberate, racial recognition ability could be related to racial preference and identification.[12] Of special interest would be a study of American Negro children who do not identify with and who do not show preference for the dominant race. Has there been deliberate teaching about racial identity in their homes? Studies could also be made of the effectiveness of current attempts to bring about pride in race through such slogans as "Black Is Beautiful" and through the development of "Black Power."[13] Implicit in the findings of the present research is the assumption that if the American social structure changes so that Negroes are no longer in a subordinate position, the racial preference and racial self-identification of Negro children will change. This assumption could be tested by studies conducted over the next several years.

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[12] This was done in a limited way by me in earlier research (1958; 1962; 1963*b*). Indications were that the process is nondeliberate, for children tended to learn the patterned types of racial preference and identification before they learned racial designations.

[13] A recent study by Floyd (1969), using my picture test with black preschool children in Philadelphia, compared the race awareness of the children of parents who differed in the strength of their belief in "Black Pride," "Black Power," etc. Floyd found that the only significant relationship between scores on the parent belief scale and the responses of their children to the picture test was: "the stronger the parent support of 'Black Power,' 'Black Pride,' and the 'Black Revolution' in general, the more the child wants to be white" (Floyd 1969, pp. 48–49).

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Dissatisfaction and Desire for Change among Chilean Hospital Workers

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The paper compares social attitudes of Chilean professional and nonprofessional hospital workers, all from the same major National Health Service hospital in Santiago, Chile. Compared with nonprofessionals, professionals were more modernistic, more satisfied, more likely to endorse broad and general programs of social change, but a good deal less likely to support militant union intervention for accomplishing short-term change. Among the nonprofessionals, those coming from families that were more nearly middle class than working class were the more dissatisfied and the more radical.

INTRODUCTION

Few civilian organizations are more clearly stratified than large general hospitals. Hospital staffs bring together, often in direct daily contact, persons possessing the most advanced education and highly refined skills their societies can offer and others who often have little more to offer than the guarantee that they will appear for work regularly. Although people who work in hospitals, especially at the lower ranks, may be more likely than their peers in other kinds of complex organizations to accept the goals that their organizational ideology proposes for them (Wessen 1958; and, for contrast, Chinoy 1955), that hardly means that their reasons for working are (exclusively or even mainly) that they are performing useful and necessary services. On the contrary, hospital workers, like those in any other type of organization, work for pay and to maintain a life outside of work that will be more or less secure, more or less satisfying. Although many studies have examined aspects of the internal status order of hospitals (see the bibliography by Simmons 1963) and observers have pointed to parallels between hospital status systems and stratification in the society beyond them,[1] it is surprising that so little attention has been directed to the way hospital workers of various ranks respond to their places in those larger

[1] Croog (1963, p. 247) writes as follows: "It is well known that unskilled workers such as janitors and maids are at a lower end of the status scale, both inside and outside the hospital, while doctors enjoy an exalted status position in both areas. The phenomenon is probably more marked in more traditional, more rigidly stratified societies than the United States."

I do not assert that this particular phenomenon is more marked in the more traditional Chilean society than in certain very modern parts of the United States. The Puerto Rican or Negro hospital janitor in New York may not have a much better chance than his Chilean counterpart to see his son become a physician. (Neither, of course, will become a doctor himself.) Nevertheless, race aside, there is little doubt that Chile is more highly stratified than the United States.

systems (but, see Hughes, Hughes, and Deutscher 1958; Wardwell 19 New 1958; Williams 1950; and Segal 1962).[2]

My purpose is to try to close that gap a bit by treating hospital rank a product and reflection of the larger social order. I shall show how Chil professional and nonprofessional hospital workers differed in moderni traditionalism and in satisfaction with their current circumstances. T professionals, as expected, were more satisfied, for they earned grea income and prestige. They were also more modernistic, since their care demand greater individualism, leading them to be more alert to vocatio possibilities and to a larger world. In both occupational groups, howev greater modernism (perhaps because it leads to or reflects more so awareness) combined with less satisfaction, led to stronger endorsements labor union activism and of propositions favoring egalitarianism.

Closer attention to class origin as a possible explanatory variable helps show that the modernistic nonprofessionals from middle-class backgrou were particularly dissatisfied and generally most inclined to endorse st that might help to relieve their discontent. Their higher initial status m have led them to expect richer lives; their modernism, to be more alert the circumstances in which they could lead such lives.

It is of particular interest that this research was carried out in Chile country deeply and self-consciously involved in trying to bring about so and economic change. Lending further interest, though at the same ti limiting the implications of the study's findings, is that Chileans who wo for the Servicio Nacional de Salud (SNS) (Viel 1964) are not necessar representative of those whose occupations involve them in other areas activity. The nonprofessionals in the population under study are all me bers of an active union that has an important place in the strongly left national labor coalition, the Central Unica de Trabajadores. As for the p fessionals, in particular the physicians, they are less than delighted ab their participation in the socialized SNS.[3] Yet, for a variety of reasons th

[2] All of these studies, set in the United States, without exception treat "problems, dil mas, and contradictions" from the limited point of view of how the individuals un study find and adapt to their own particular status. None of the studies asks how su individuals might conceive or respond to changes in social structure that might have indirect consequence of changing that status.

Another kind of exception to the statement in the text is provided by studies or d cussions of physicians in, or responding to, what in the United States we are accuston to hearing called the "threat" of socialized medical systems. I cite only two of the m prominent discussions of socialized medicine set outside the United States, namely, Fr (1957) and Ben-David (1958).

[3] There is no doubt that they accept socialized medicine in principle, and are convin that, without the SNS, health care levels in the country would be a good deal lower th they are. However, they are quite dissatisfied with the administration of the system a the pay they receive as state employees for their participation in it; many report th they have more than once thought about how nice it would be to quit working for it they could. (Actually, they are under no legal obligation to be part of the system. Ho ever, without it they lose some (though not all) hospital rights, the chances to deve and maintain effective colleague networks, and their participation in pension plans.)

The *Colegio Médico de Chile* (Chilean Medical Association) has estimated that 70 p cent of the SNS physicians in the Santiago area, which has about 60 percent of the phy

will be explored at a greater length, they are at the same time likelier to possess a highly developed sense of social consciousness than members of many other highly placed groups. Finally, it is important to recall that professionals and nonprofessionals alike are state employees in the capital city, circumstances intensifying their awareness of their political and social environment and their reactions to changes in it (Lipset 1960).

Like Chile, many developing countries already possess a sizable, multifaceted middle class whose members reflect its internal variety through their different political and social attitudes and activities. The materials presented here frankly deal with no more than a small and selective part of this group. Still, they should be of interest because of their contribution to a fuller understanding of a complex and dynamic stratification pattern, whose every shift affects the choices that may be available among alternative routes to social change.

SETTING AND METHOD

Locale

The data were all obtained from the services of internal medicine and of surgery in the same large general hospital in Santiago. The hospital is part of the National Health Service, serving a predominantly working-class population under terms available to manual workers, indigents, and their families, as specified in the regulations of the national social security system. Each service cared for about 130 inpatients. Both services were also teaching units of the university medical school, with a solid reputation for the quality of both their medicine and their instruction. In general, the hospital is reputed to be among the best in the country, and the two units studied are, in particular, thought to be better administered than many other units of their type even in other teaching hospitals.

Nevertheless, conditions were hardly tranquil at the time the research was carried out. Not only were all of the workers employees of a state agency in the capital city, but the nonprofessionals in particular were members of a strong and militant union. Just before the study began, there had been a national strike of all state medical personnel except doctors that lasted for over two weeks. Unfortunately, it is impossible to know, without follow-up investigation, what effects the still-charged atmosphere had on the results we are about to present. Furthermore, the environment made it impossible to consider studying some aspects of the organization in greater detail, such as through the use of sociometric or other methods, where the analysis would have depended on identification of specific individuals. Such techniques would have threatened to compromise our assurance of complete anonymity, and without that assurance the research simply could not have been carried out.

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cians in the country, have no income from private practice. This seems to me to be a greatly exaggerated estimation, especially if one were to eliminate *becarios* (residents) from the computation, but I have no way of substantiating my opinion in this matter.

Variables

Modernism-traditionalism.—To measure this variable (whose name I use in a fashion so derivative as to make me almost apologetic) I relied on an index composed of four items that Kahl (1968) has found to have high loadings on the factor he calls simply "modernism." In his research, he applied scores on this factor derived from fourteen different scales, made up of fifty-eight different items, with data gathered in large-scale studies in Brazil and Mexico. The four items used here come from the two of the fourteen scales that had the highest factor loadings on Kahl's "modernism," namely, activism-passivism and integration with relatives. In this population, the four items form a Guttman scale with a coefficient of reproducibility of .93. In subsequent analyses I refer to those who accepted two or more of these items as "traditionalistic."

Kahl's definition (1968, p. 6) of what modern values signify is as follows. "Traditional values are compulsory in their force, sacred in their tone, and stable in their timelessness. They call for fatalistic acceptance of the world as it is, respect for those in authority, and submergence of the individual in the collectivity. Modern values are rational and secular, permit choice and experiment, glorify efficiency and change, and stress individual responsibility."

The following is an example of the items: "It is preferable to have an ordinary job near one's parents than to have a better job far away from them."

Satisfaction-dissatisfaction.—To measure this variable, I used an index whose name and items speak for themselves. The four items in the scale formed a Guttman scale with a coefficient of reproducibility of .94. An example is as follows: "Does the income that all of you receive in your family permit you to reach and satisfactorily maintain the living standard you want?" ("Almost completely", "generally" are acceptance categories.) I refer to those accepting three or more of these items as "satisfied."

Labor union sympathies.—This is an index of three items, each significantly related to each other and to total score. The first item calls for a judgment of what unions help to accomplish; the other two items require judgments of how active unions ought to be. I scored each of the items -1, 0, or $+1$ in the following manner: activist response: $+1$; moderate response: 0; passive response -1. Total scores could and did range from -3 to $+3$, with the higher scores indicating stronger prounion sympathies. An item and its response categories are as follows: "In hospitals and other medical organizations, do you think that unions ought to play a role that is (1) more militant than in other organizations and businesses because the workers need more; (2) as militant as in other places; (3) less militant because the functions of health agencies have so much importance for the society?"

Egalitarian interests.—Finally, the scale of egalitarian interests is made up of four items (coefficient of reproducibility, .93) intended to measure respondents' willingness to call for continuing changes in the distribution of

the country's resources and incomes. It is a rough measure at best, since (despite its patent sociopolitical overtones) it is too crude to serve as good indication of more specific political tendencies. The predominant Chilean political ambience, unlike that of North America, is statist and leftist. Members of any of several leftist or centrist parties would be quite willing to reject all of the scale items, but for different reasons and with shaded qualifications that the instrument does not capture. Thus, the scale serves only to approximate respondents' tendencies to be attuned and sympathetic toward certain social structural changes.

Two of the scale items follow: (1) The country cannot progress much unless the middle class can improve its situation in comparison with that of all the other classes. (2) In Chile, the people who have made more money than others have the right to keep it.

Population

In terms of this paper's emphasis on external (i.e., extrahospital) stratification, it is necessary to present some materials about the separate occupational groups that were studied, so that the reader can interpret their perspectives for himself. The study data were gathered in personal interviews sixty to ninety minutes long, carried out with members of these groups by the author or his two trained assistants.

The professionals were made up of three smaller groups: fifty-three physicians and residents, ten interns, and eight university-trained nurses. The fathers of about half the physician-intern group were professionals, most of them physicians. Neither age nor formal hospital rank was associated with any particular pattern of origin. For present purposes, the physicians, residents, and interns may all be regarded as doctors.[4] Their occupation has high prestige status, whether seen in terms of an older (and now almost outmoded) frame of reference, that viewed the autonomous professions as reserved for the sons of a landed aristocracy, or in terms of the current perspective, wherein advanced technical training is thought to be a sufficient basis for respect and esteem.[5]

In the main, the nurses' fathers held middle-rank administrative posi-

[4] In the Chilean system, interns are not hospital employees but students in their final year of medical school. All internships are of the rotating type. Our interviews took place toward the end of the academic year, when all of the interns were looking forward to becoming, and in many cases were already thinking of themselves as, full-fledged doctors. The *becarios* had all finished their internships; moreover, about half of them had already practiced their profession in provincial areas and had returned to Santiago for specialty training.

[5] The situation is not dramatically different in the United States. The following comment (Becker and Geer 1963, p. 170) could almost be applied to Chile, though it describes the North American case: "Medical students tend to be recruited from the higher socioeconomic groups in our society. More than half of those graduating in 1960 had fathers who were professionals, proprietors, or managers. On the other hand, a substantial minority had fathers in white-collar, manual, or farm work. It has been shown, too, that in the period 1900–1950 there has been an increasing democratization of recruitment, with progressively increasing proportions of physicians tending to come from lower ranks in the social structure."

tions. More important than the specific nature of their class origin is that Chilean nurses are university graduates; their occupational group, while not without its problems, is openly and officially recognized as a profession whose members perform skilled and honorable work.

All of the nurses we interviewed had completed four years of training at the University of Chile, the country's foremost educational center. They were able to enter the university only after having completed secondary school. The second criterion alone places them among the best-educated 20 percent of the country's population; the first criterion, in the top 5 percent. Therefore it is my impression that although some very high-status Chileans would reserve the term "professional" for members of the traditional liberal professions, the *enfermera universitaria* is less ambiguously a professional person than is her North American colleague. Furthermore, a distinction should surely be drawn between these Chilean nurses and those in some Latin American countries whose education and training is much less, and much less uniform, and who, perhaps as a consequence, have far less prestige There is no reason to hesitate in saying that a Chilean nurse's occupation, and the educational process it implies, are sufficient to give her clear middle-class status.

The other two groups considered here compose the category of the nonprofessionals: ninety-one nursing assistants (*auxiliares de enfermería*) and twenty-five ward maids (called variously *empleadas* as in the term *empleada de casa*, or *auxiliares de aseo*). Although nurses have administrative responsibility over nursing assistants, these two groups are differentiated not only by the character of the work they do; that, in fact, is often remarkably similar. The assistants have considerably less education, receive lower pay, and are far less likely to be able to enter into more or less equal-status relations with physicians, in the hospital or outside it.[6] In this population, about half of the *auxiliares* come from low-level white-collar families; the other half come from the working class. Their job has strong overtones of personal service, and the period of special training that it demands is short. Many Chileans with higher social rank than theirs would not consider nursing assistants to be part of the middle class at all, but the technical nature of their work, their regular employment, and their official categorization as *empleados* (white-collar) rather than *obreros* (blue-collar) would put that assumption in doubt.[7] All things considered, if forced to assign some sort of name to the position they occupy, we would call it marginal lower-middle class.

[6] Formal requirements for the job are presently a tenth-grade education and a nine-month training period. Interestingly, about a tenth of the physicians were married to nurses, none to nursing assistants. Another nice touch is that professionals do not refer to nurses simply as "nurses," "graduate nurses," or "registered nurses." The term they use is *enfermera universitaria*, or university-trained nurse. I might also add that one of two hospital lunchrooms was for administrators, physicians, nurses and technicians. The other was for *auxiliares*, porters, drivers, etc. Some *auxiliares* were unhappy about such obviously inegalitarian arrangements.

[7] Wilensky (1966) has written, "Received labels for occupational information are, like racial stereotypes, convenient and misleading. It is no news that census-type categories

Ward maids rank lower than nursing assistants in all of the dimensions so far considered. Nearly four-fifths derive from rural or urban blue-collar backgrounds. About a third failed to complete grammar school. Their only claims to middle-class rank are the ones they make for themselves in answering a question about self-placement, and their being assigned to the category of *empleados*. Their work is menial and unskilled, divorced from the glamour attached to the most ordinary of technical treatment performances. They do have and use the opportunity for engaging in expressive social interaction with patients, but they have no well-developed ideology of patient care that they could use to elevate their conception of their tasks. There is no question that in objective terms they are a working-class group, despite feeling themselves part of the middle class, and even though their work is not likely to be thought of as simple manual labor.

FINDINGS

The starting point for analysis is the relation between occupational rank on the one hand and modernism-traditionalism on the other. Sixty-nine percent of the professionals and 30 percent of nonprofessionals are modernistic; 66 percent of professionals are satisfied, compared with only 34 percent of the nonprofessionals. Both findings are significant at less than .001 and are consistent with the results of previous research (Kahl 1968; Germani 1963; Eisenstadt 1966; Hagen 1962; Inkeles 1960). It is nevertheless of interest to note that important differences in dissatisfaction do occur, even though the professionals have a much higher standard of desires.[8]

Table 1 shows that among neither the professionals nor the nonprofessionals is there a clear association between modernism-traditionalism and satisfaction. In fact, about the only new information that table 1 provides is that the gap in satisfaction is especially great in the comparison between modernistic professionals and similarly oriented nonprofessionals. In the professional group, greater awareness of possible life chances occurs along with a greater capacity to capitalize on them; in the nonprofessional group modernism may be slightly associated with discontent. Still the most important factor distinguishing the groups is obviously that the nonprofessionals in general lack the talents and resources to be able to exercise much influence over their circumstances.

Thus the question that follows almost ineluctably concerns how differ-

encompass vast variations in rights and duties on and off the job." Wilensky's comment applies with particular force to much of Latin America, where census categories are also official classifications that sometimes involve strikingly different obligations and privileges. For example, see Viel (1964) for differences in social security and medical care benefits available to *empleados* and *obreros*, respectively. This type of omnipresent categorization has other effects, too, as on status awareness and autoassignments of status made by people who are subject to it.

[8] For example, professionals expect to have good automobiles and to send their children to private schools (which are expensive) in order to try to insure their acceptance by the university (which has only a nominal cost).

ences in the expression or mobilization of discontent may be associated with other differences in social status and orientations. Table 2 is addressed to these issues. It shows how, among professionals and nonprofessionals, modernism-traditionalism and *satisfaction* relate to union sympathies and egalitarian interests.

To begin, note that the professionals have lower union sympathies scores than the nonprofessionals. The reasons for this finding are clear. First, the great majority of the professionals, that is, the physicians, are not unionized, while all the nonprofessionals are unionized. Second, a large number of the physicians either now have, or expect to have, private practices which do or will provide them with a greater share of their income than their state salaries do. Third, the organizational conditions under which the professionals work are very important to them, with respect to such matters as proper

TABLE 1

PERCENTAGE SATISFIED, BY MODERNISM-TRADITIONALISM, IN THE PROFESSIONAL AND NONPROFESSIONAL GROUPS

ORIENTATION	GROUP	
	Professional	Nonprofessional
Modernistic...	70% (49)	29% (45)*
Traditionalistic	59% (22)	38% (71)†

* Each professional group is more satisfied than the modernistic nonprofessional group at <.001 (one-tailed χ^2).

† Modernistic professionals are more satisfied than the traditionalistic non-professionals at .05; however, the difference between traditionalistic professionals and nonprofessionals is not significant.

instrumentation and facilities, efficient personnel organization, etc. Not only is this set of interests one that does not depend much on the professionals' own organizational activities devoted to vindicating claims for higher salaries or fringe benefits in working conditions, but at times these conditions are more hindered than helped as a result of union activities—or the threat of union intervention—among lower-ranking personnel. Thus many of the professionals have mixed but nonetheless intensive feelings about the effects of subordinates' union activities. While they tend to support nonprofessional subordinates because of their awareness of the low salaries that non-professional subordinates receive, they are wary of possible interferences with orderly hospital work processes and of influences that could serve as counterweights to some of the prerogatives of professional authority. In contrast, it is clear that among the nonprofessionals there is no method other than union activity—aside from personalistic dependency relations that are rather hard to establish and maintain in an atmosphere as func-

tionally specific as the hospital—for exerting control over their working conditions or for trying to improve their life circumstances.

In spite of their misgivings about unions, egalitarian interests are stronger among the professionals, an important point because it belies the common assumption that the higher-ranking group would tend to be more conservative. A good starting point for explaining why these professionals have higher egalitarian interest scores is to note that they are much better informed than the nonprofessionals. Therefore they are more aware of current

TABLE 2

PROFESSIONALS' AND NONPROFESSIONALS' MEAN UNION SYMPATHIES AND EGALITARIAN INTEREST SCORES, BY MODERNISM-TRADITIONALISM AND SATISFACTION

	UNION SYMPATHIES		EGALITARIAN INTERESTS	
	$\bar{x}$	(N)	$\bar{x}$	(N)
Modernistic professionals:				
Dissatisfied	1.30*	(15)	2.40†	(15)
Satisfied	0.41	(34)	2.20	(34)
Traditionalistic professionals:				
Dissatisfied	0.67	(9)	1.90	(9)
Satisfied	−0.38*	(13)	1.70†	(12)
Modernistic nonprofessionals:				
Dissatisfied	1.80‡	(32)	2.00§	(32)
Satisfied	1.50	(13)	1.50	(13)
Traditionalistic nonprofessionals:				
Dissatisfied	1.20	(44)	1.60	(44)
Satisfied	0.88‡	(27)	1.20§	(27)
Total professional	0.60‖	(71)	2.04#	(70)
Total nonprofessional	1.30‖	(116)	1.66#	(116)

* Modernistic dissatisfied vs. traditionalistic satisfied professionals, $t = 2.2$, $p < .05$.
† Modernistic dissatisfied vs. traditionalistic satisfied professionals, $t = 2.1$, $p < .05$.
‡ Modernistic dissatisfied vs. traditionalistic satisfied nonprofessionals, $t = 2.8$, $p < .01$.
§ Modernistic dissatisfied vs. traditionalistic satisfied nonprofessionals, $t = 3.7$, $p < .001$
‖ Total professional vs. total nonprofessional, $t = 3.7$, $p < .001$.
Total professional vs. total nonprofessional, $t = 3.6$, $p < .001$.

doctrines asserting that self-sustained economic and social development depends on broad changes in social structure that may provide full societal participation to the still marginal masses of the urban and rural poor.

Furthermore, the professionals are the more cosmopolitan group, or, translated into more formalistic terms, they are the more likely to have external comparative-reference groups, such as colleagues who exercise their professions and organize their lives under what sometimes appear to be the idyllic conditions of North American medicine and suburbia (idyllic, at least, with regard to strictly professional-technical and consumer-oriented points of view, since many other aspects of Yankee medicine and life are often far from admired). These comparisons, set against the backdrop of

Chilean poverty represented by the patients with whom these professionals come in contact every day, do not necessarily increase personal dissatisfactions—not when the professional himself lives in a suburb of his own, socially separated, like his American colleague, from the poorly fed, badly clothed, and barely housed. Instead, these comparisons tend to divert attention from progress that Chile itself has made, and to center it more on the gap that still separates the country from developed nations, where people scrap autos that most Chileans can hardly afford to think about buying.

But are not the professionals also alert to the possibility that broad-scale changes of the kind they appear to be endorsing here may threaten their own status; and would not such a threat tend to make them more conservative? To answer these questions, it is necessary to take other conditions into account.[9] Recall that the professionals are highly trained specialists in a country with relatively few specialists. They therefore expect to be in demand under almost any conceivable type of political and social arrangement; many of them frankly believe that they would not fare worse under more state control than in their present unsatisfactory dependence on the National Health Service. While the prospects of maintaining a substantial private practice might diminish, such practices are already hard for many doctors to establish, especially for the younger ones. Not only is much of the population too poor to be able to afford very much private medical care, but, in addition, despite recent SNS efforts to change the pattern, it is still the case that medical professionals are concentrated in two or three major urban centers, thereby increasing the competition. While it would not be correct to say that most physicians feel secure, they do regard themselves as indispensable, particularly *within* the state medical sector. Furthermore, it is very important to see that they are far from calling for revolution; they want changes, and some of them rapidly, but still under conditions of order and relative stability. Sometimes ethical scruples lead them to feel that they ought to avoid militant organizational activities that might keep them from performing services they believe to be vital,[10] and at those times this is another reason why they appear more willing than others to stake their bets on longer-term transformations. But perhaps the most important point is that, as a strategically located elite group, they can depend more on their own efforts than others can, gaining more from threatened doctors' strikes than from allying themselves with others of lower status whose large numbers mean that their aspirations, even if limited, take a very large part

[9] For example, unpublished materials on recent entrants to Chilean medical schools show that, compared with the Americans described in Merton et al. (1957), Chileans are far more likely to couch their reasons for electing medicine as a career in terms of community service, social development, etc. Some of their responses are remarkably detailed and well reasoned. These data are from a study being carried out by the Chilean sociologist Adela Berdichewsky. See also Glazer (1968).

[10] In addition, those who are professionally most influential have little need for and little interest in efforts to win more state pay for the group as a whole. I hope this comment will not be interpreted to mean more than it says, for I never heard or observed any indication that individual professional advancement was in any way dependent on flattering a chief by honoring his preferences for lesser activism.

of the state medical system's personnel budget. Thus, as the scores for union sympathies show, only the most dissatisfied of the professionals are inclined to place much stock in the justice or prospect of gaining very much from identifying themselves with the aims and organizational techniques of the people who work under them. In a sense, then, they both express and assuage their sentiments by calling for broad changes that will redound to the general welfare, while concentrating on steps designed to insure the improvement of their own welfare.

Summing up, table 2 makes clear that in both the professional and the nonprofessional groups, modernism-traditionalism and satisfaction interact to exert strong effects on "radicalism," if I may use that term to refer to the two dependent variables in the table. Compared with the modernistic and

TABLE 3

MEAN SCORES FOR SATISFACTION, UNION SYMPATHIES, AND EGALITARIAN INTERESTS IN THE NONPROFESSIONAL GROUP BY CLASS ORIGIN AND MODERNISM-TRADITIONALISM

Class Origin	Satisfaction ($\bar{x}$)	Union Sympathies (x)	Egalitarian Interests ($\bar{x}$)	N
Middle:				
Modernistic	1.05*	2.0†	2.2‡	22
Traditionalistic	2.06	1.1	1.6	31
Working:				
Modernistic	2.04	1.5	1.5	23
Traditionalistic	2.21	1.2	1.3	39

NOTE.—All differences are in terms of the t-test.

* Difference between top group and other three significant at .001 or less.

† Difference between top and third group significant at .10; between top and other two, at .05 or less.

‡ Difference between top and bottom group significant at less than .001; between top and other two, at less than .02.

dissatisfied, traditionalistic and satisfied respondents are less aware of the positive possibilities of change, less eager that it occur, less ready to take steps to accomplish it, and less inclined to want it to be sweeping. We believe that these findings provide strong corroboration for our interpretations of what the various variables mean to members of the two occupational categories.

Class Origin

In this section I center my attention on the nonprofessionals. Because only four of the professionals' fathers had blue-collar jobs, it was not possible to apply this variable in the higher ranking group.

Table 3 shows the combined effects among the nonprofessionals of class origin and modernism-traditionalism on the three remaining variables with which the study has been concerned. Other tendencies are visible in the

data, but there is only one outstanding finding: modernistic nonprofessionals from white-collar backgrounds are more dissatisfied than the traditionalistic or those from humbler backgrounds; they are also more sympathetic toward union activism and show more positive interest in changes tending toward greater egalitarianism.

That these respondents so clearly tend toward radicalism may seem out of keeping with their middle-class origins, but it does not seem out of keeping with their present situation, in light of their blocked opportunities for upward mobility, their objective basis for being able to identify with those of higher status, the possibility that their occupational status is an indication of downward mobility (or at best, of stability) as compared with their parents' rank, and the circumstance that they are espousing points of view that receive widespread support in many sectors of Chilean society. In any case, given the relative indifference of all the other nonprofessionals, it does not seem unreasonable to suggest that the most effective, if not the loudest, demands for social change in Chile will not come soon from those who have long been taught to settle for little, from those who (like the professionals considered above) think they know what steps the country needs to take but who already have enough to be able to afford to anticipate change without rushing it. Rather demands for change come from those who believe it legitimate for those in their status to want a great deal, but who have a hard time getting it.[11]

Seen in a broader perspective, the data also show that class consciousness may not be an automatic and inevitable consequence of occupying and deriving from a given class position.[12] Instead, it would appear that conscious-

[11] Chilean copper workers, for example, are not the exploited masses but are the elite of Chilean labor. They (not yet the poor and still relatively uninformed rural population) are the most visible block of militant leftists in Chile. There are, of course, a variety of means that can be used to make people desire actively to have more than they already possess; among them is fostering contact with a group already used to the idea of demanding more for itself. A powerful demonstration using data from Chilean copper-working and agricultural communities is to be found in Petras and Zeitlin (1967).

[12] Since our findings run counter to a great body of evidence showing that the vote for leftist parties is greatest among those who derive from, currently occupy, and identify themselves with the working class, and that any single one of these elements conduces toward a similar result—weaker to the extent that middle-class influences are also present—it is necessary to consider some possible reasons for the apparently surprising results reported here.

First, of course, is that we have not studied party choice as such, but only attitudes presumptively assumed to be possibly related to it. Second, as pointed out earlier, voting for any of several Chilean parties could satisfy desires to express radical tendencies, such as would be the case with the left-center Christian Democrats. Third, the nonprofessional respondents are all women who, unlike men, are less likely to vote left even if they are drawn into the political process. This tends to diminish associations between class factors and voting choice.

Finally, and this is perhaps the most convincing point, another study set in a major Latin American city shows some results similar to those reported here. Soares (1965), studying class origin, identification, mobility, and party choice in Rio de Janeiro, found that nonmanual respondents in routine jobs (like the respondents of the present study) were less likely to prefer the workers' party if their origins were nonskilled manual (25

ness of the social environment itself must first arise. In the absence of pervasive organization or truly catalytic symbolic events, such awareness can normally be expected to occur more frequently among those conditioned by formal and informal training to search and question their environment than among those more inclined to take it for granted. Whether such questioning will then lead to active support of the status quo or to protest, couched in terms of solidary class interests, will depend on connections among a variety of factors we are not able to consider here. Some of these factors are the strata that people occupy, their relation to the prevalent opportunity structure, current ideologies of status as reflections of broad cultural symbols and values, historical mythologies deifying individualism or organicism-collectivism and emphasizing integration or conflict, whether or not there are grounds for identifying an imperialist oppressor, etc. It is clear that with respect to all of these factors—and I do not presume that they form a complete catalog of relevant dimensions—there are people in Chile who, occupying different positions, try actively to manipulate some factors and find themselves almost passively responding to other factors. None of these elements has yet been fixed, whether by edict or by popular will, and the champions of different camps brandish slogans like weapons, hoping for their day to be the heroes of the arena; while a few others, perhaps more calculatingly, look forward to the massive free-for-all that they believe will finally settle the questions.

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percent) (the case of almost all working-class-origin respondents here) than if they were from skilled manual (37.7 percent), routine nonmanual (30.1 percent), or high nonmanual (37.8 percent) backgrounds. Among the manual workers, however, worker's party choice was consistently higher among those with lower social origins. In both studies, what seems to be reflected is a common Latin tendency to avoid working-class identification where possible.

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The Professional Self-Concept of Music Students[1]

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As a result of their study of a medical school, Becker and his associates suggest that students in professional schools acquire only the self-concept of "student." In contrast, Merton and his associates, in their studies of medical and law schools, propose that students gradually acquire the self-concept of "professional." The issue is important to the theory of adult socialization. Music conservatories afford an excellent test case because music students engage in professional activities while they are still in school. Multivariate analyses of the effects of professional activity and the effects of the music school suggest that both actual professional activity and the professional school itself contribute to the development of a professional self-concept. But the variables interact. Students who do not engage in "clinical" activities (professional work) do not generally acquire a high self-concept. Much of the effect of the music conservatories is not through direct social contacts with teachers or students. Rather, students acquire musical skills which are the prerequisite for professional work and for symbolic rewards, both of which lead to a professional self-concept.

Studies on the socialization of professionals have generally assumed that, in addition to learning technical skills, a student physician or lawyer acquires the values, attitudes, and self-concept of a professional. These aspects of the professional's role are acquired through participation in the formal social structure of the professional school, but especially through informal interaction with instructors and students.

Recently, some of these assumptions have been questioned (Carlin 1966). The values and attitudes of a professional may not grossly differ from those of other college-trained individuals. The new values may not really become an integral part of the new professional's emotional makeup. The superficial devices by which students cope with the strains of a professional education may be far more important in their immediate consequences than any long-range or even short-term effects of the acquisition of professional values.

The socialization of artists (in this paper, of musicians) is an ideal setting

[1] This is a publication of the Bureau of Applied Social Research. This paper represents the combined research efforts of four classes in the Columbia University School of General Studies, taught by the author, and several classes at Barnard College taught by Renée C. Fox. J. Ronald Milavsky and J. M. B. Edwards contributed as course assistants. Susan Flusser Tausig helped to analyze the data. To these persons, to the staff of the Bureau of Applied Social Research, as well as to the administrations and students of Juilliard and Manhattan schools of music, I express my appreciation. The Columbia University Council for Research in the Social Sciences and the School of General Studies helped to support data gathering, and the National Science Foundation supported the analysis.

for the study of adult socialization. Contrary to popular mythology, professional artists are made, not born. Though artistic techniques, especially in music, are often learned early, indoctrination into the culture of artists may come quite late. Relatively few of the adolescent circle of friends of students now in music conservatories were musicians. Except for the very few artists who grew up in New York, Paris, or other art centers, and whose parents belonged to a circle of artists, most artists come to the urban capitals of art precisely because the culture of art exists in few other places. The few outstanding regional centers of artistic culture are usually the college departments of art, drama, and music. The professional school thus has a special place of importance in the field of art. If we further study students in a professional school in the heart of an art capital like New York, we can test for the relative importance of childhood socialization, the outside professional ambiance of the art world, and the effects of the school itself.

In this paper we shall focus on a single issue in the theory of adult socialization: the role of the music conservatory in the acquisition of a professional self-concept.[2] Though there is an elaborate literature on the notion of self-concept and self-image,[3] we take the professional or occupational self-concept to mean simply that noun which a person usually applies to himself when asked the standard identifying question of modern society, "What do you do?" This simple noun informs much of a person's life. As a test case, we suggest that the reader recollect his own typical answers. Does he say "teacher," "college professor," or "sociologist?"[4] Merton and his colleagues (Merton et al. 1957) argues persuasively that the acquisition of a self-concept as physician is vital to the performance of that role. In the case of artists, gaining a self-concept as a professional is perhaps even more vital. Most physicians, when asked what they do, have no hesitation in answering "physician" or "doctor." In our society, the usual test of whether a person holds a given occupation or profession is whether he earns his living, or most of it, from the practice of that profession.

[2] Our data consist of questionnaires sent in the winter of 1961 to all Juilliard School of Music students who at that time were in either their first year or their last two years at the school; almost identical questionnaires were sent to all 600 students of the Manhattan School of Music in the winter of 1963–64. The questionnaires were in part modeled after the Columbia Bureau of Applied Social Research studies of medical and law schools. From Juilliard 171 usable questionnaires, or about 65 percent, were returned; from Manhattan, 364 usable ones, or 60 percent. The returnees from Juilliard and Manhattan were compared with the nonreturnees as to major, major teacher, dropout, and annual audition grade. There were no statistically significant differences. Despite the "squareness" of the task, it is our impression, verified through follow-up interviews, that the quality of response is almost uniformly high.

[3] Self-concept is a better term for our use than self-image. The latter connotes a picture, even a way of carrying one's body. The former connotes a verbal conception. The concept, not the emotional or psychological image, is our major concern. For a review of the self-concept literature, see Wylie 1961.

[4] The answer may depend on who asks the question and in what context, but that is another matter and the reason for the qualification "usually" in our definition. For present purposes it is not necessary for us to decide what constitutes an occupation and what qualifies as a profession.

In the 1960 census, however, only 28 percent of those who claimed to be "actors," 38 percent of "dancers," and 43 percent of "musicians" said that they were actually employed as such on a full-time basis during the previous year. Since the census lumps teachers of art together with practitioners, the employment figures for the nonteachers must be much lower. Compare these figures with the 78 percent of persons in other professional-technical occupations who were employed on a full-time basis (Baumol and Bowen 1966, p. 472).

Even when they are employed, most musicians tend to supplement their income from nonartistic activities. As a result of this predicament, the artist is constantly placed in the position of having to explain that he is "really" a musician, even if at the moment he is driving a cab. Often, for all one can see, the professional self-concept of a musician is the only thing that makes a professional musician. In some ways the lack of subtlety of the consequences of the self-concept of musicians, at least as compared with physicians, makes the topic easier to study.

THE CONTROVERSY

Now let us see in detail what the controversy about self-concept and professional skills is all about. Huntington (1957) reports that medical students were more likely to feel like doctors at the end of their medical school training than at the beginning. The perceived reaction of patients to the medical students as well as the students' perceived success in dealing with patients' problems contributes to the increased awareness of self as a physician. Thielens (1965), in a study of law school students, suggests that selected background factors are important in establishing a professional self-concept. Low parental income and not being Catholic, for example, are associated with high professional self-image. Experiences within law school, such as receiving high grades and being consulted by other students, were of even greater importance. These experiences in turn seemed to affect a student's perception of his future success in law. On the other hand, Becker et al. (1961) find that their medical students "do not take on the professional role, largely because the system they operate in does not allow them to do so. They are not doctors, and the recurring experiences of being denied responsibility make it perfectly clear to them that they are not. Though they may occasionally, in fantasy, play at being doctors, they never mistake their fantasies for the fact."

These findings are not in basic disagreement. Rather, they suggest that the structure of a profession and the social arrangements of a professional training school may be responsible for the creation of a professional self-concept.[5]

[5] Bloom (1965, pp. 143–184) concludes, in a review of all the medical school studies, that the value climate of a school as well as its structural arrangements affect the type of self-concept which students acquire.

JUILLIARD AND MANHATTAN SCHOOLS OF MUSIC

Let us briefly review some of the characteristics of the schools (as of 1961–64) which affect the development of a professional self-concept. Juilliard School of Music, since Van Cliburn's triumph in Moscow, is the best-known music school in the United States. It draws students from all over the world. Less than half listed their present hometown as New York. At the time of our study the school had about 700 undergraduates (including the dance department, which was not included in our study) and offered both a diploma and a bachelor's degree in music. Of our sample, 70 percent were in the degree program. Graduate students were not included in the study. An education degree, however, is offered at neither the undergraduate nor the graduate level. The school emphasizes performing, not teaching. Much of the school revolves around the student-master relationship. Despite or because of this, the school is said to be highly competitive and consequently to put a great deal of pressure on students. Of the respondents, 60 percent found at least a fair amount of competition among the students in general, and 40 percent found a great deal among students in their own major.

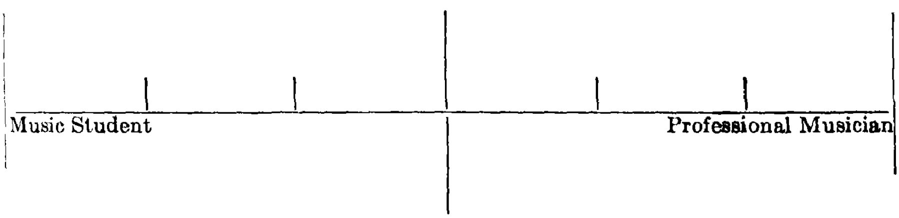
Manhattan School of Music, as if to emphasize its position as heir apparent to Juilliard, intends to move into the Juilliard building in the fall of 1969, when the latter drastically decreases its enrollment and moves to Lincoln Center for the Performing Arts. An outgrowth of a settlement house and with a much smaller endowment than Juilliard, Manhattan now has about 500 undergraduate and 100 graduate students, all of whom were sent questionnaires. Manhattan, like Juilliard, also offers both a diploma and a degree, with less than 4 percent in the diploma department. Academically, it differs from Juilliard in several respects. First, it does offer a master's degree in education and permits a large number of undergraduates to major in "theory," which is usually a preeducation course. It is also said to have a less competitive atmosphere. Our sample agrees with this stereotype. Only 35 percent found at least a fair amount of competition among Manhattan students in general, and only, 17 percent thought there was a great amount of competition among students in their major. Yet in terms of their psychological orientation to competition, Manhattan students were just like Juilliard students. In both schools, only 40 percent said they enjoy competition.

Aside from the issue of competition and the presence of an education degree at Manhattan, the most important difference between the two schools is the position of the piano department, and this affects opportunities for assuming the professional role while one is still a student. At Juilliard piano majors account for over 45 percent of the students; at Manhattan only 25 percent are in the piano department. Manhattan has a higher proportion of music union members among its students; it follows that Manhattan students are likely to have had more professional engagements. This is not only caused by their somewhat lower social class background but also reflects the limited performing opportunities for the many Juilliard pianists, who, unlike Manhattan pianists, are less likely to do club work.

Students at a major music school such as the ones we are studying do not "play" at being musicians. There is no comparison between the professional skills of a first-year medical or law student, who generally knows little about his profession, and a first-year music student, who is often an accomplished musician. Two-thirds of both Juilliard and Manhattan first-year students had placed in the top three in some music contest, prior to entry. One-fourth of Juilliard and almost three-fifths of Manhattan first-year students belong to a performing union. During their first semester, one-fifth of Juilliard and two-fifths of Manhattan students gave over sixteen performances for pay.

PROFESSIONAL SELF-CONCEPT AND MUSIC

With this brief introduction to the world of music students in mind, let us see what the data look like. We asked the music students the same question asked of law students (Thielens 1965), with appropriate modifications: "We would like to know whether you tend to think of yourself these days as a music student, as a professional musician, or as 'part way' between a music student and a professional musician. As a spur-of-the-moment judgment, where would you place yourself these days? Draw a vertical line through the place on the scale which represents how your feel." (See illustration below). The scale scores were divided into four groups, roughly approxi-



mating the normal distribution into which the replies fell. Manhattan students, by the way, reflecting their greater actual professional experience, tend to score themselves slightly higher than the Juilliard students. But the question itself could be interpreted by students in a variety of ways. An investigation of some of the correlates of responses to the self-concept question removes most of the ambiguities. Those who feel themselves more professional—that is, those who checked one-third of the way or less from the professional end of the scale (high self-concept)—are much more committed to a career in music than those with a low self-concept (a difference of over 25 percentage points).[6] They are not much more likely than others to choose a solo career, but they are about 30 percentage points more likely to expect to perform, in whatever aspect of music they choose as their career. Consequently, they are 15 to 20 percentage points more likely to choose New York City as their residence. But if things do not go well, they are more likely, by over 40 percentage points, to say they will keep on trying. In the short run at

[6] Detailed tables on these and other findings are available from the author.

Juilliard, and in both the short and long run at Manhattan, those with a professional self-concept expect to earn more money. This is not mere misunderstanding of the music field. Those with a professional self-concept are not more likely than others to think that musicians earn a great deal of money.

Especially intriguing is the ideology of those with a high professional self-concept at Juilliard, as compared with the ideology of those with a low professional self-concept. Juilliard students with a high professional self-concept are 20 percentage points more likely than others to be bothered by the prospect of a hack music job, a possibility which probably has not really occurred to those with a low self-concept. Those with a high professional self-concept make no bones about the appeal of music to them, despite its hazards: one can express oneself (a difference of 20 percentage points), one does not have to punch a timeclock (40 percentage points difference), and, perhaps best of all, one is applauded and cheered (40 percentage points difference). In an interesting contrast, the Manhattan students are less oriented to a prima donna role. Though the professionals tend to worry more about hack jobs, their attraction to music is not especially different from that of the others. Partly responsible is the greater number of Juilliard students who intend, ultimately, to be soloists (39 percent as against 19 percent for Manhattan). Also, the less competitive atmosphere of Manhattan may dampen some of the more romantic expectations of the professionals.

THE MAKING OF A PROFESSIONAL

A professional self-concept, therefore, does have consequences. But what helps to form this concept? No so-called background variable of class, ethnicity, or musical experience of parents is related to our indicator of self-concept. Since the past does not produce a professional self-concept, we must look to present influences in the music school and elsewhere.

Being a good musician is, of course, very important. Less than 10 percent of students in the lowest quartile of excellence has a high self-concept as professionals. The two components of excellence—self-rated skill and objective audition grade—also show about the same relationship with self-concept.[7] All these associations increase from the first to the last years of music school. Analysis of crosslagged correlations in a two-year panel at Juilliard (N = 72) gives no evidence, however, that either excellence or

[7] The excellence index is the sum of a four-point skill score and a four-point grade score, with either component counting double if the other was not available. The skill score was obtained by noting the number of times a student said he was more skillful than each of the following reference individuals or situations: "students of your major teacher," "students in your major field," "students in general," "your major teacher," "other teachers," "the average professional in your field," "the virtuosi in your field," "an absolute standard of skill." The audition grade represents the grade resulting from a performance before a jury. Each performing major must be so judged each spring. For nonperformers we took the average grades in music subjects. Nonetheless, there were about 20 percent for whom no grade could be entered. These students were much more likely to be dropouts, suggesting that students who expected to be dropped failed to take the jury examination, dropped out before the examination, or both.

self-concept "causes" the other variable.[8] In any case, as will be evident, musical ability, as indicated by the excellence rating or actual jury audition ratings, is not the major factor which establishes a student's professional self-concept. Symbolic reward for excellence, as indicated by placing in the top three in a competition, is also related to a student's self-concept as a professional. Only 11 percent of Juilliard students who did not place in the top three had a high professional self-concept, but 28 percent of those who had placed in the top three in four or more competitions had a high self-concept. This relationship is much more pronounced at Manhattan, where there are fewer contest winners.

Excellence, as well as symbolic rewards, is associated with upper-class school standing. As a result, and in common with other studies of professional schools, we find that the longer one remains in school and the higher one's official year in school (the two do not necessarily coincide because of the large number of transfer students in both Juilliard and Manhattan), the higher one's professional self-concept.[9] For example, 37 percent of freshmen but 62 percent of seniors (in either school) have a high or medium professional self-concept. Also, the longer one is in school, or the higher the official year, the more contact a student comes to have with other musicians. And, the more meaningful contacts with circles of professional musicians, the higher the self-concept of students. Professional performances and union membership are more highly related to a student's professional self-concept than any other variable. About 10 percent of nonunion members (in either school), but over 40 percent of union members, have a high professional self-concept. Seven percent of those who have not performed for pay in the fall semester, but 48 percent of those who performed sixteen or more times, have a high professional self-concept. Merely "hanging around" with the students does not produce a high degree of professional feeling, although spending time with professionals helps a bit at Juilliard. Even the number of different types of contact with one's major teacher is not positively related to professional self-concept. Spending time with students is just not a good way to arrive at a feeling of being a professional.

THE RELATIVE IMPORTANCE OF SCHOOL AND THE "OUTSIDE"

We have a very complicated situation to unravel. Musical ability, time in school, associations with professionals, union membership, professional performing, and contest winning are all intertwined. We must examine several of these factors at once to assess which is more important—anticipatory or actual socialization. First, in order better to understand the

[8] Students who answered questionnaires in 1960 were still in the school and returned questionnaires in 1962. The rate of return of available students was 60 percent—the same as in the previous year. This rate was not related to having answered a questionnaire in the previous year, suggesting that random factors were indeed at work.

[9] Dropout of those who have a low self-concept as musicians may conceivably contribute to the relation between official year and self-concept, yet there is no evidence in our data that self-concept is systematically related to dropout.

variables, we shall analyze several of the key factors taken two or three at a time; then, in order to consider all things at once, the entire set of relevant factors will be explored in a "tree" analysis.[10]

To begin with, let us look at the simultaneous effects of official class and the number of professional performances on self-concept. Table 1 suggests that each is important in its own right, but that the combination of the two leads to an especially high self-concept. It is also worth noting that professional performing is more important for Manhattan underclassmen than for Juilliard freshmen, and that there is no advance from under- to upperclass Manhattan undergraduates in the proportion who feel professional, *unless* they have also performed professionally. Further, heavy professional experience is more important than mere school attendance *without* performing at Manhattan, and almost as important as school attendance at Juilliard.

TABLE 1

PERCENTAGE HIGH* SELF-CONCEPT BY NUMBER OF PROFESSIONAL PERFORMANCES, OFFICIAL CLASS, AND SCHOOL

No. of Professional Performances Last Semester	Manhattan			Juilliard	
	Freshmen and Sophomores	Juniors* and Seniors	Grads†	Freshmen	Juniors‡ and Seniors
2 or fewer......	24% (66)	25% (44)	68% (22)	25% (27)	52% (55)
3–15...........	26% (23)	53% (32)	86% (29)	53% (17)	68% (19)
16 or more.......	44% (25)	82% (44)	90% (30)	36% (11)	94% (18)

NOTE.—Numbers of students on which percentages are based in parentheses.
* In this and following tables high means medium high and high—those who are above the median
† Graduate students present only in Manhattan sample.
‡ Juniors and seniors at Juilliard mean fourth- and fifth-year students.

If music union membership is substituted in table 1 for actual professional performing, the results are about the same.

It has been assumed that professional experiences and union membership "cause" a student to feel professional. But it may also be true that if he feels professional, he then seeks out professional experiences; and further, because he feels professional, he is better able to pass professional auditions. Our data are not entirely adequate to test this possibility, though examination of crosslagged Sommers's (1962) D coefficients for the small ($N = 72$) Juilliard panel suggests that self-concept is the outcome of experience rather than the cause of it.

Since excellence is related to professional performance, it is conceivable that all we have been saying is that better musicians are more likely to feel professional—hardly a startling finding. Because self-ratings of skill are akin to self-concept, then controlling for skill should sharply reduce the relation between professional performing and a professional self-concept.

[10] The difference between detailed cross-tabular exploration and wholesale regression analysis is of course the difference between explaining and accounting for a variable.

Table 2 shows that this is *not* the case. In fact, if we control for professional performance, then skill is barely related to self-concept.

One of the ubiquitous features of the music world is the contest. These range from competitions to prove who is the best violinist in a local junior high school to famous international competitions, such as the one which made Van Cliburn, a Juilliard student, a world-known pianist. We asked each student how many times he had ever placed in the top three in a competition, leaving the definition of such an event up to him. Despite this possible ambiguity, winning competitions is highly related to professional self-concept, as table 3 shows. Except for graduate students, who may feel that contests are passé, official class and competition winning contribute about equally to the development of a high professional self-concept.

Both the number of times a student has won competitions and the frequency of his professional performances are related to self-concept, even when one factor is controlled for the other. But among upperclassmen who have played a great deal professionally, competition winning makes no

TABLE 2

MANHATTAN AND JUILLIARD—PERCENTAGE HIGH SELF-CONCEPT BY NUMBER OF PROFESSIONAL PERFORMANCES, SELF-RATING OF SKILL, AND OFFICIAL CLASS

	Official Class			
	Freshmen and Sophomores		Juniors and Seniors	
No. of Professional Performances Last Semester	Low Skill	High Skill	Low Skill	High Skill
2 or fewer	19% (78)	31% (19)	35% (66)	49% (49)
3–15	40% (25)	33% (15)	39% (18)	69% (32)
16 or more	35% (23)	54% (13)	79% (19)	88% (42)

NOTE.—Numbers of students on which percentages are based in parentheses.

TABLE 3

PERCENTAGE HIGH SELF-CONCEPT, BY NUMBER OF TIMES EVER PLACED IN TOP THREE OF A COMPETITION, OFFICIAL CLASS, AND SCHOOL

	Manhattan			Juilliard	
No. of Times Ever Placed in Top Three	Freshmen and Sophomores	Juniors and Seniors	Grad	Freshmen	Juniors and Seniors
Never	14% (44)	44% (55)	84% (32)	19% (21)	55% (40)
1–3	31% (51)	56% (39)	74% (23)	43% (21)	63% (40)
4 or more	33% (27)	68% (33)	89% (28)	44% (18)	71% (28)

NOTE.—Numbers of students on which percentages are based in parentheses.

difference at all. And among upperclassmen, professional performing makes more of a difference for those who have seldom won competitions than does competition winning make a difference for those who have seldom performed professionally (table 4). In short, symbolic rewards may help the inexperienced to feel professional, but matter less to those who have "been around."

There is a curious nonfinding about the effects of the years a student spends in school. The most "significant other" in a conservatory may well be the teacher who gives the student his lessons. Yet the number of contacts a student has with his teacher outside the classroom does not seem to affect the development of his professional self-concept. Why this is so is not clear. Many students and teachers whom we interviewed, however, stressed that teachers attempt to be very objective and that they tend not to encourage too much even those students with whom they are personally

TABLE 4

MANHATTAN AND JUILLIARD—PERCENTAGE HIGH SELF-CONCEPT BY NUMBER OF TIMES EVER PLACED IN TOP THREE, NUMBER OF PROFESSIONAL PERFORMANCES, AND OFFICIAL CLASS

No. of Professional Performances Last Semester	No. of Times Ever Placed in Top Three					
	Freshmen and Sophomores			Juniors and Seniors		
	Never	1–3	4 or More	Never	1–3	4 or More
2 or fewer	10% (39)	25% (36)	30% (23)	34% (56)	45% (38)	57% (21)
3–15	35% (11)	31% (16)	46% (13)	46% (13)	57% (14)	68% (24)
16 or more	20% (10)	50% (18)	50% (8)	83% (24)	87% (23)	87% (15)

NOTE.—Numbers of students on which percentages are based in parentheses.

friendly. As one famous piano teacher put it, "What shall I tell her [one of his students]? She is so talented. She will be a great artist. But where will she play, what will she do?"

Many students do not even attempt to face the stress of becoming a concert or performing artist, and many shift to teaching as their major ultimate or permanent career in music. The meaning of a professional self-concept to a future music teacher might be quite different from its meaning to a student who intends to become a performer. Professional performing should be a less potent force in developing a future teacher's self-concept as a professional. Table 5 thus controls for career plans. As career intention comes closer to being reality, professional performance beomes less and less an important factor to future teachers and more and more important to future performers. This is especially true among graduate students who intend to teach and for whom a master's degree obviously replaces performing as the sign of professionalism.

Thus far we have shown that standing in school, as measured by a student's official class, and meaningful contact with the professional world of music, as indicated by professional performing, contribute about equally to

the development of a professional self-concept as a musician, although professional performing is less important to future teachers. Sheer excellence, as measured in various ways, is related to both advancement in school and contacts with professional musicians. But once the former two factors are taken into account, excellence becomes a less important determinant of professional self-concept.

We have analyzed the relative impact of some of our key variables but have yet to account, as best we can, for the total phenomenon of the professional self-concept. We should now like to see what factors will most economically sort students into those with high professional self-concepts and those with low professional self-concepts as musicians. The procedure we shall use is "tree" analysis.[11]

In this method, each category of each predictor variable is scanned to determine the single dichotomy which best explains the variance of the dependent variable. Then the single predictor variable, which when dichotomized best explains the variance, is used to split the original sample. This procedure is followed for each of the two resulting groups, then for each of the four resulting groups, and so on, until some predetermined stopping criteria are reached. The procedure is mechanical; variables are not tagged for logical priority or theoretical importance. It is crucial, therefore, to understand the difference between prediction and explanation. For example, though both career choice and number of professional performances appear in a sensible way in the "tree," the particular way they happened to enter it does not allow for an easy understanding of their rela-

TABLE 5

MANHATTAN AND JUILLIARD—PERCENTAGE HIGH SELF-CONCEPT BY NUMBER OF PROFESSIONAL PERFORMANCES, OFFICIAL CLASS, AND PERMANENT CAREER PLANS

No. of Professional Performances	Plan to Teach as First Choice			Do Not Plan to Teach as First Choice		
	Freshmen and Sophomores	Juniors and Seniors	Grads	Freshmen and Sophomores	Juniors and Seniors	Grads
2 or less..	11% (18)	53% (34)	100% (6)	22% (80)	37% (81)	56% (16)
3–15.....	25% (8)	22% (9)	78% (9)	41% (32)	78% (42)	90% (20)
16 or more.	50% (6)	75% (20)	91% (12)	40% (30)	91% (42)	100% (18)

NOTE.—Numbers of students on which percentages are based in parentheses.

[11] We used the AID program as described by Sonquist and Morgan (1964). The version which we used (programmed by Eli Marks) differs in some respects from the Michigan version. The minimal-size parameter controls the size of the resulting splits. Thus, if the minimum size is fifteen, as in our case, no group will be eligible for splitting unless it contains thirty cases. This program also computes students T-test for the difference in means for the best split and allows the significance of this difference to determine whether or not the split will be accepted. Thus, P_2 cannot be greater than P_1, though in our case only P_1 determined whether a split would be accepted.

tive impact on the professional self-concept of music students. For future teachers, nothing is so important as getting the master's degree. In the aggregate, however, performing is more important.

The tree in figures 1 and 2 resulted when the eight variables noted in the tree were put into the "hopper" along with eight other variables: time spent with students, teacher contact, musical background of parents, the desire to do well in school, which school attended (Manhattan or Juilliard), sex of the respondent, career choice for the first few years, and the excellence index, which is the sum of skill and grades. It is very important to observe

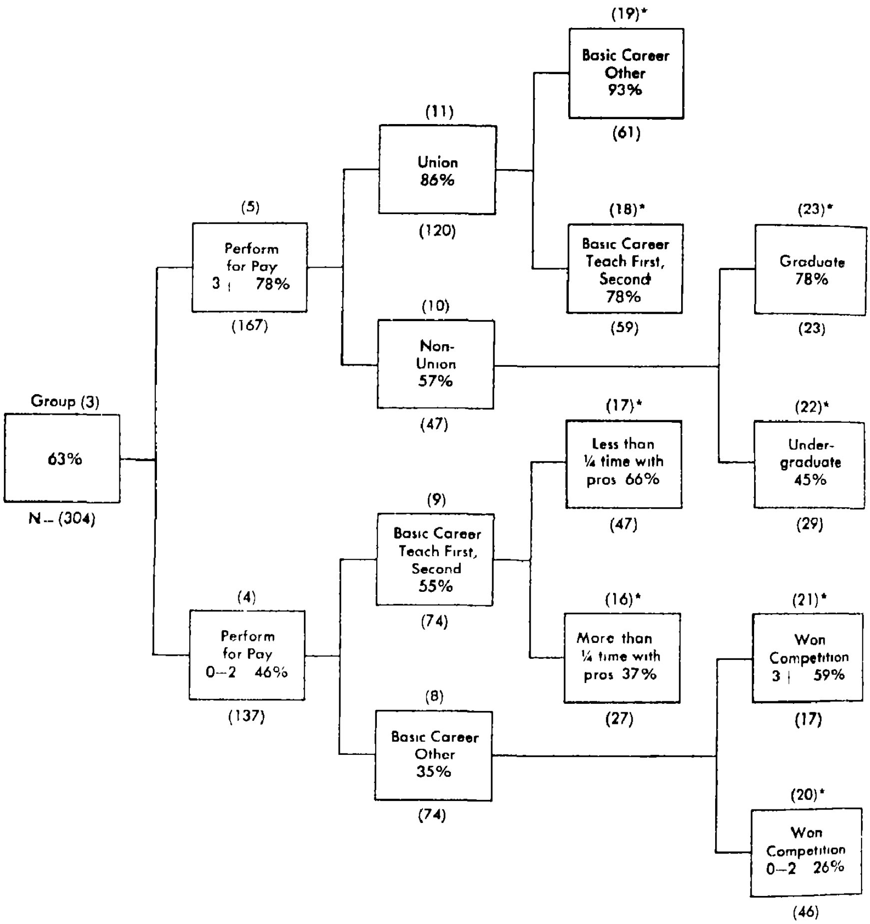


FIG. 1.—Percentage high self-concept of upper classmen and graduate students (Manhattan and Juilliard). The symbol * denotes a final group. The criteria for terminating splitting were set at: minimum BSS_i/TSS_T = .006; minimum size of group to be split = 30. (BSS_i is the between sum of squares of the two groups which would result if a group was split. TSS_T is the total sum of squares of the entire sample. For our data, a BSS_i/TSS_T of .006 also insures that a t-test for the difference of group means on any split will be at least 2.00 SD.)

that the last eight variables, especially the excellence index, did not appear in the final tree. This means that to begin with the variables that did appear in the tree accounted for somewhat more of the variance than the variables that did not appear. Further, once the variables in the tree made their appearance, the variables not in the tree could no longer explain as much of the variance as some other variables further down on the list. For example, taken by itself, excellence is a more important variable than basic career choice. But once official class, professional performance, union membership and competition winning were used to split the sample, excellence did not matter as much as basic career choice. This point on the relative importance

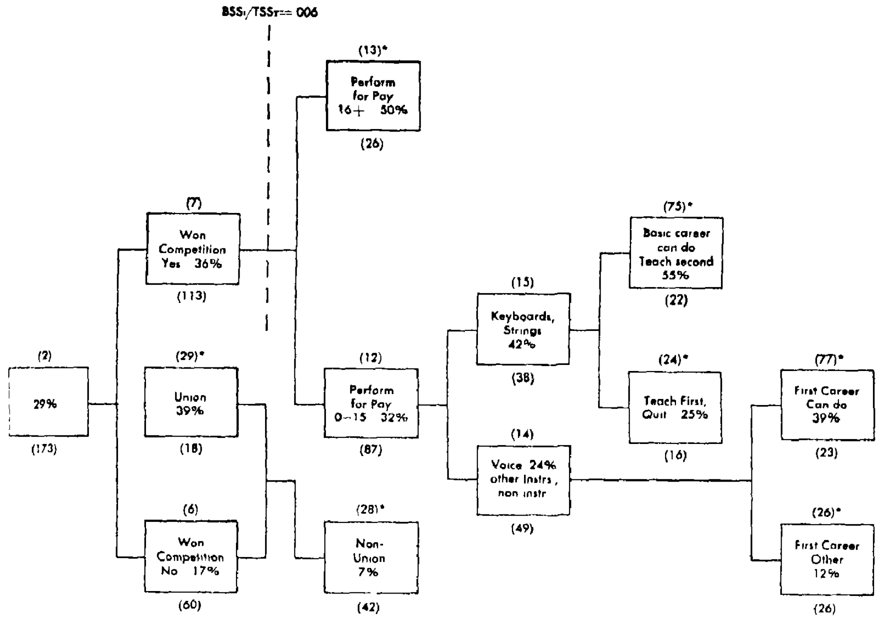


FIG. 2.—Percentage high self-concept of lower classmen (Manhattan and Juilliard). The symbol * denotes a final group. BSS_i/TSS_T = .005 and minimum group eligibility = 30. If BSS_i/TSS_T is set to .006, then group 7 is a final group, and the groups following group 7 to the right of the dotted line do not exist.

of correlated predictor variables needs to be emphasized. Our procedure here is totally mechanical. As will be seen, playing for pay is much more "important" in the tree than union membership. But actually, taken two at a time in data not shown here, playing for pay is only very slightly more important in accounting for the variance. But once professional performance does enter the tree, it accounts for most of the same variance that its cousin, union membership, accounts for. Thus the latter appears to be much less important. It is not.

With these qualifications in mind, the tree speaks for itself. Some comments may be made, however. The very first split was into upper and lower classes, with the ensuing splits for the first group shown in figure 1 and the

splits for the second group shown in figure 2. Membership in the upper classes in school (in figure 1), performance for pay, union membership, and an intention to teach (as either a first or a second choice) catapult a student into an extremely high probability of a professional self-concept. Nonunion upperclassmen who do perform professionally have a high chance of possessing a professional self-concept only if they are graduate students. Most of these are working for a master's degree in education.[12] Similarly, upperclassmen who have not performed professionally but who do intend to teach, and who in addition back up their intention by not "hanging around" with professional musicians, have a fairly high professional self-concept. They have a professional self-concept as teachers, not performers. On the other hand, those upperclassmen who have not performed for pay but who do

TABLE 6

MANHATTAN AND JUILLIARD SELF-CONCEPT TREE
PERCENTAGE OF VARIANCE ACCOUNTED FOR
BY EIGHT VARIABLES*

Variable	At .006 Level†	At .005 Level†
1. Official Class	.1171	.1171
2. Professional performances	.0637	.0690
3. Union membership	.0334	.0334
4. Ever placed in top three	.0238	.0238
5. Basic career	.0179	.0247
6. Time with professionals	.0120	.0120
7. First career	...	.0078
8. Major instrument	...	.0055
Total percentage of variance accounted for	26.8%	29.13%

* The figures are analogous to β^2 in linear multitude regression. Hence they are shown as decimals.

† Minimum BSS_i/TSS_T.

intend to perform have a moderately high self-concept as professionals only if they have won competitions. Thus, competition winning is an alternative route to a professional self-concept. For underclassmen, (figure 2) the crucial factor is competition winning. Union membership helps those underclassmen who have not won competitions. The part of the tree after the dotted line consists of groups which split the sample only when the splitting criterion is slightly relaxed. Here, performing for pay among those who have won competitions is important. For those who have not performed a good deal, career intention and type of instrument are important. In general, under-class members have a self-concept as professionals mainly on the basis of past achievements, such as competition winning, and union membership and future expectations. The present is a time of latency, as it were, while they are absorbing the impact of the professional school itself.

Table 6 summarizes the relative importance which the tree assigns to

[12] The only graduate students included are at the Manhattan School of Music.

predictors. The reader should recall our previous admonition about "importance" in tree analyses. The first four predictors tell almost the whole story. Altogether, considerably more variance is accounted for than in many sociological studies.

CONCLUSION

Socialization to a professional self-concept does happen during music school attendance. This finding does not directly contravene Becker (1961) and his associates or directly support Merton and his colleagues (1957). For the key factor about a major music conservatory is that it is both a school for students and an arena for performers. Socialization to a professional self-concept does not take place directly through reference group or role-model phenomena; neither contacts with teachers nor time spent with students directly contributes to a professional self-concept. Anticipatory socialization takes place only when the social structure of the school allows one actually to play the role that will eventually be one's full-time concern. The social structure—not the social psychology of the situation—is the major factor. Because both Juilliard and Manhattan schools of music are in the music capital of the world, and because the students whom they attract and who remain are good enough to get union jobs, they acquire a professional self-concept. This self-concept is developed through actual participation in the activity that means the most to the circle of musicians: professional performance.

What does the music conservatory itself contribute? The language of statistical analysis has led us to treat the theoretical notion of "self-concept" as if it were an unmitigated good. Obviously, it is not. In particular, administrators and teachers in both schools feel that too early a development of a professional self-concept is harmful to the ability of a student to remain within the student role and meet his present requirements. Too much anticipatory socialization, as Merton (1957, pp. 384–86) points out, leads to poor motivation to play the current role. So the effect of professional playing is subdued among underclassmen, especially among Juilliard students. Symbolic rewards count for more. Just as the clinical years come for the most part in the second half of a medical education, so does the effect of professional experiences greatly increase in importance as students advance through the music academic system. One of the major functions of the school, then, is to permit and control the development of self-concept as a professional, allowing it to take place at such a time that it provides for motivation to transfer into a new situation without overly harming the fulfillment of the current role.

In the end, music conservatories do what they are supposed to do. Our data show no changes over the years in the values which students profess about music and the world of music. It is not the role of the schools to produce such change. Rather, their role is to develop musical talent into musical skill, and this skill affords the prerequisites for a professional self-concept. Data we have analyzed elsewhere as a regression tree show that the single

highest predictor of musical excellence is union membership, followed by official class, and then professional performance. Actually, there is probably a mutual effect taking place, which regression analyses based on cross-sectional data cannot fully demonstrate, and the regression is partly in the wrong direction. To get the kind of jobs students at these major conservatories want, musical excellence is the major and perhaps only requirement. Union membership itself does not "cause" excellence—in fact, the technical musical abilities required by unions are not a major barrier to any of the students in our sample. But union membership is a requirement for the jobs students want and audition for, and hence it serves as a major predictor of excellence, though it should really be looked upon as a consequence of excellence. So the schools, over time, both develop excellence and, at the same time, increasingly permit students to make use of their abilities in the professional world. And it is this latter experience which is crucial to the development of a professional self-concept.

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Commentary and Debate

COMMENT ON JACK GIBBS'S "MARITAL STATUS AND SUICIDE"

"Gee," he thought to himself as he stood on the corner avidly watching the girls go by, "I'm sure glad that my age, sex, and marital status category has high status integration. I'm without role conflicts, despite feeling bridled by monogamy, and I'm not likely to suicide." This fictional (?) case is intended to suggest that Gibbs's recent (*American Journal of Sociology*, 74, no. 5 [March 1969]: 521–33) application of the theory of status integration as applied to suicide rates misses the forest for the trees.

The possibility of multivariate analysis with cultural conditions treated as a contextual dimension seems to have escaped Gibbs's attention. Age and sex (ignored except as specifications and given no explanatory significance) account for as much or more of the variance in American white suicide rates as status integration does, and they do so more precisely. Furthermore, Gibbs's continued emphasis on status integration—this article is one in a long series of other works, including the book of which he makes mention—seems to me an attempt, by repetition, to convince us to accept a new concept. Yet in this piece that concept is little more than a measure of the percentage distribution of different types of marital and nonmarital statuses in fifteen different age categories.

At least since the days of Durkheim we have had reason to expect that in Western society males commit suicide more frequently than females, the older more frequently than the younger, and the unmarried in general more frequently than the married.[1] In fact, Gibbs has edited a volume in which one of his contributing authors shows how these three factors have consistently affected American suicide rates in just this fashion.[2]

Now consider table 1, which I have prepared to compare the rank-order correlation coefficients between the suicide rates and (*a*) status integration and (*b*) age. My hypothesis is that men at any age have higher suicide rates than women of whatever age, and that in each sex group the rate also increases with age. Thus it would be lowest among young women, would rise among older women, rise again among young men, and be highest of all among old men.

In two of three comparisons, my hypothesis leads to more effective predictions than Gibbs's; in the third, there is virtually no difference. Note also that my application can and does treat of both age and sex. Gibbs's does not, and it was necessary to compute and supply the coefficient between status integration and suicide for the two sexes combined.

My approach is hardly original. It is merely an application of the most

[1] Emile Durkheim, *Suicide*, trans. John Spaulding and George Simpson (New York: Free Press paperback edition, 1967). See esp. bk. 2, chap. 3, "Egoistic Suicide (continued)."

[2] Sanford Labovits, "Variation in Suicide Rates," in *Suicide*, ed. Jack Gibbs (New York: Harper & Row, 1968).

conventional way of examining percentage differences (suicide rates are merely percentages of percentages) in a dependent variable affected by several others that precede it in time. Yet Gibbs specifically rejects any such approach in a note where he takes on Blalock on an issue of methodology. Another advantage of being conventional in this case is that it allows a weighting of the relative strength of different dimensions. Thus, marital status appears to be a more consistent variable than age in explaining the female rates, while both appear to operate in about the same fashion on the male rates. Moreover, both variables matter more among the men. For example, the ratios of male to female suicide rates are higher in the maritally unattached categories than in the married one.

Finally, Gibbs tells us that his predictions of suicide rates from the measure of marital integration, within the fifteen age groups by four types of marital and nonmarital relationships, are better than chance. He got

TABLE 1

RANK-ORDER CORRELATIONS BETWEEN SUICIDE RATES AND MARITAL INTEGRATION, AND AGE: BY SEX AND FOR BOTH SEXES COMBINED

Group	By Age (ρ)	N*	By Marital Integration† (ρ)
Men's suicide rate..........	.996	15	−.59‡
Women's suicide rate.......	.46	15	− 51‡
Men's and women's rate§ ...	.90§	30	−.18

* Number of separate age groups.
† As defined and calculated by Gibbs.
‡ As originally reported.
§ By age and sex, as explained in the text.

42/60 among males; 30/60 among females. Chance would be 15/60 in each case. But that's a bit of dirty pool, since the married, who are between 60 and 65 percent of all suicides, have the lowest rates in most age categories. Thus I predicted—before examining the tables to check out the findings—that in each age category the married would have the lowest rate (support, social success, etc.); then the single (alone, but without failure or loss); then the widowed (having suffered loss); and then the divorced (having suffered loss through failure). The score? Forty-three of sixty for men, not much of an improvement, but 54/60 for women!

Categories like age, sex, and marital status have meanings of their own, and such meanings vary from culture to culture. Why seek a single, unitary explanation that explains only a bit of the variance in suicide rates in (perhaps) many different cultures when with very little extra effort we can explain more, and more clearly, in any one of them? Why not ask why being unmarried seems especially more likely to lead to suicide among men than among women? Why not ask why American men's suicide rates go up and up with age, while women's peak is at about age 55?

My tentative answer to such questions is that in American society it hurts to fail, that it hurts more when one is supposed to be manly, assertive, and vigorous; hurts more still when the failure seems to be irrevocable; and that it is easier to respond to the hurt when one does not have to stay around to meet others' requirements. In our culture, for example, old men fail by not being able to work well or at all; menopausal women fail by losing their femininity.

Society sets the limits for types of existence, and culture defines them. Durkheim's greatness lay not in merely naming but in explaining the force of suicidogenic issues. Now that we know more than he, we should do no less, even in our quests for theoretical parsimony, symmetry, and balance.

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THE AUTHOR REPLIES

Segal's commentary brings to mind an observation by Calvin Coolidge—when unemployment increases a lot of people are out of work. The point is that Segal offers no basis for predicting differences in suicide rates without prior knowledge of those differentials. According to him, whether a population has a high suicide rate depends on its age, sex, and marital composition. That proposition is *generally* true, but it merely recognizes that typically the suicide rate is higher for males, the elderly, and the unmarried. As such, the proposition adds nothing to what is already known.

What Segal disregards is one goal in theory construction—to identify *a* common denominator. To illustrate, consider again the *generally* higher suicide rate for males, the elderly, and the unmarried. These differences do not constitute a theory; rather, recognition of them only leads to a question: What do the three populations share in common as opposed to females, the young, and the married? Segal does not even recognize the question. The theory of status integration may not be adequate, but at least it provides an answer.

In taking certain "facts" of suicide as given, Segal conveniently ignores their relativity. I say "conveniently" because surely he knows that in many populations the suicide rate does not increase throughout the age scale. One common pattern is a decrease beyond a certain age, as among U.S. females; and another pattern is an increase, then a marked decrease, and finally a sharp increase (Japan is a case in point). These patterns appear year after year in some populations; hence it is pointless to assume, as Segal does, an invariant relation between age and suicide. Even if the relation were invariant, a question would remain unanswered: Why is age correlated with the suicide rate? Segal ignores both the question and the fact that the theory provides an answer—age is correlated with the suicide rate if it is also correlated with status integration.

What has been said of age applies also to sex. The ratio of the male to the female rate varies substantially from country to country, among age groups,

and even from one marital status to the next in the same age group. Ac cordingly, what is gained by presuming, as Segal does, that the differenc between male and female suicide rates is a constant?

At various points in his commentary Segal treats the relation betwee suicide and marital status as invariant. Note, for example, his "prediction that the rank order of suicide rates by marital status in all age groups is a follows: married (lowest rate), single, widowed, divorced. Now it is signifi cant that the order is exactly inverse for status integration measures. Con sidering all ages above 14, the proportion in each of the marital statuses an therefore the status integration measures are ordered as follows: divorce (least), widowed, single, married. So Segal need not have resorted to in tuitive psychologizing about the four marital statuses; he could have de rived the order of the suicide rates from the theory.

Apart from the theory, consider what Segal's "prediction" implies—tha the *relative* suicide rates of the four marital statuses are invariant. Table 2 and 3 of the article clearly indicate otherwise. Among U.S. white male (1959–61) the rank of the suicide rate for single persons is 4 (lowest) in som age groups but in others it is 2; the range of ranks for the married is 2–4; an it is 1–3 for both the widowed and the divorced. An even more telling com parison refers to the ratio of the married suicide rate to that of other marita statuses. Among white males ages 15–19, the ratio of the married to th single is 1.54, but in the age group 75–79 the ratio is 0.44. Thus, stated mor abstractly, the relative "immunity" enjoyed by the married is more thar three times greater in one age group than in another. Among white females the rank order of the four suicide rates is much less variable from one ag group to the next, but there is great variation in the relative immunity of the married. For example, in the age group 15–19, the ratio of the married to the single rate is 1.85, but it is 0.46 in age group 30–34.

Two of the foregoing ratios provide a dramatic illustration of the relative immunity to suicide. In the age group 15–19 (both sexes) the married have a *higher* suicide rate than the single, and that order is by no means peculiar to the United States at one point in time. Then note the marked tendency for the difference between the suicide rates of the married and widowed to decrease with age—and it has been found that in some populations the widowed actually come to have a lower rate than the married. Given all of this evidence, why toy with the idea that there is, even in one country, an invariant relation between suicide and marital status?

Invariant or not, Segal does not derive the relation of suicide and marital status from a general theory. Furthermore, given such a theory, Segal rejects it. According to the theory, the married would be expected to have the lowest suicide rate in *most* age groups because the degree of integration is greatest for that status in *most* age groups; but Segal says "that's a bit of dirty pool, since the married, who are between 60 and 65 percent of all suicides, have the lowest rates in most age categories." Here Segal's criticism is unique—the theory is damned if it does generate correct predictions and damned if it does not. In that connection, note that the percentage of *total* suicides who are married is not relevant, since it does not determine the

suicide *rate* of the married or, for that matter, the rates of the other marital statuses

The contingent relation between suicide and age, sex, or marital composition is clearly consistent with the status integration theory. It can be shown that the degree of status integration (e.g., occupational) varies by sex, age, and marital status; equally important, the variation is not the same from one population to the next. For example, in the United States females have more occupational integration than do males, but the amount of sexual difference varies from age group to age group, by race, and from state to state. On that basis alone, a constant sexual difference in the suicide rate is not expected. Then consider the following U.S. suicide rates (1959–61): white males, ages 15–19, 5.6; white males, ages 85 and over, 67.7; white females, ages 15–19, 1.6; white females, ages 85 and over, 5.3. In both cases the suicide rate is higher for the elderly, but the ratio is 12.1 among males and only 3.3 among females. However, such variation in the elderly-young difference is entirely consistent with the theory. For white females 15–19 the measure of marital integration is .729, and it is .673 for ages 85 and over. Corresponding figures for white males are .925 and .433. Hence it is not surprising that only among males is the suicide rate much higher among the elderly.

Some of Segal's observations reflect basic issues in sociology. He obviously dislikes the concept of status integration, evidently because it is alien to the speech habits of laymen, including Segal's street-corner voyeurs. Segal is not alone among sociologists in his concern with the mental life of actors; but, hopefully, others will join me in not succumbing to reductionism or phenomenology.

Still another issue is reflected in Segal's characterization of the concept status integration as "little more than a measure." Unfortunately, he does not recognize that the measure applies to all statuses and not just to marital integration, meaning that the concept has a wide range of application. But I suspect that something else irritates Segal—the concept does not strike him as "meaningful" or, stated another way, it has no explanatory significance; and therein lies an issue. If Segal is really asserting that concepts should explain phenomena, I disagree categorically. To the contrary, a concept does one thing and only one thing—it designates a class of phenomena. Explanation is a matter of the empirical relations among classes of phenomena, and predictions of those relations are derived not from concepts but from a theory, which means that the concepts explain nothing whatever. Finally, consider the larger implication. If one insists on evaluating a theory by an intuitive assessment of the component concepts, then systematic tests of the theory are pointless.

Since I am often not aware of my real motives, it is intriguing to be informed that work on the status integration theory is "an attempt by repetition to convince us to accept a new concept." Yet it will be difficult to mend my ways, laboring as I do under the illusion that repeated tests of a theory are desirable; and certainly the audience will be confused if each report of a test employs different concepts.

Unlike some other critics of the theory, Segal does provide an alternative—three of them in fact. Early in his commentary a strictly actuarial explanation is advocated, that is, variation in the suicide rate is to be explained by what is known about the relation between suicide and age, sex, or marital composition. As we have seen, that explanation presumes a fairly close relation, which is patently not the case for all populations. Furthermore, the actuarial approach would leave the relation between suicide and age, sex, or marital composition unexplained. Then there are other forms of variation in the suicide rate that could not be explained. In the United States it can be shown that when age, sex, and marital status are held constant, the suicide rate varies by color; and it probably also varies by occupation, labor force status, and parental status. How would Segal explain such variation?

An answer is suggested by the manner in which he "predicted" the order of the suicide rates by marital status—intuitive psychologizing. Naturally, the single must have the next-to-lowest suicide rate because they have no sense of "failure or loss." Segal supposedly made such predictions before examining the rates, but, even so, try to extend his second "theory" to a prediction about differences in suicide rates by age, sex, occupation, labor force status, race, and parental status. He does not do it, and I dare say the reader will find it difficult. If one examines the rates first, then, of course, it will be no chore at all to *invent* explanations. The rate is higher for whites than Negroes; well, obviously, it is due to the more competitive life-style of whites and the failures that ensue. Not plausible? No problem, because there are an infinite number of other possibilities; and we can practice instant insights until we hit on something that makes us feel comfortable. All such explanations share one thing in common with that offered by Segal—they are ad hoc.

Whatever its shortcomings may be, the theory of status integration is not ad hoc; it applies to virtually any form of variation in the suicide rate. Segal does not mention that quality of the theory, nor does he acknowledge that it has been tested literally hundreds of times. Perhaps he does not know of the other tests, but, even so, I cannot see why he poses questions as though they are unanswerable by reference to the theory. For example: "Why not ask why American men's suicide rates go up and up with age, while women's peak is at about age 55?" Given the data in tables 2 and 3 of the article, the answer should be obvious. Marital integration among males decreases with age up to about 85, but the decrease ends much earlier for females. Further, there is reason to believe that an increase in labor force integration occurs much earlier among females. These sexual differences were discussed in the article (see pp. 528 and 530), and for that reason alone I do not see how Segal can regard the theory as unrelated to his question.

In the final section of his commentary Segal sets forth a third alternative—the suicide rate is determined by "cultural meanings." Conceivably, there could be a particular cultural meaning that is the decisive factor in all social units, and in his illustrations Segal implies that the meaning of "failure" could be that factor. However, he does not explicitly make that

assertion, and some of his statements suggest that the explanation of a high or low suicide rate is to be culturally relative, which is to say, ad hoc. In any event, since Segal neither defines cultural meanings nor specifies a procedure for its measurement or classification, he has operated in the best tradition of sociological theorizing—throw out ideas and let the audience make of them what it will. As to the suggestion of trading a formally stated and testable theory for vague utterances about cultural meanings, no thanks. However, an issue transcends this debate. What we have in this particular case is merely more evidence of widespread dissensus in sociology as to the appropriate criteria for assessing theories.

Jack P. Gibbs

University of Texas at Austin

COMMENT ON ORDEN AND BRADBURN'S "WORKING WIVES AND MARRIAGE HAPPINESS"

Orden and Bradburn in their recent article (*American Journal of Sociology* 74, no. 4 [January 1969]: 392–407) have pointed to some serious deficiencies which have often plagued research dealing with the marital relationships of the working wife. Such deficiencies have included (1) the researcher's complete neglect of the husband, (2) lack of clear conceptualization of "economic necessity" as a reason for wife's working, and (3) unsatisfactory measures of marital adjustment. The authors have attempted to combat these shortcomings in their own studies of the working wife. For example, Orden and Bradburn did interview both men and women for their study. They have utilized a refined conceptualization of marital happiness which is multidimensional, and they used five different measures of "marital happiness," which allowed a validity check through a comparison of paper and pencil tests with the respondent's own subjective judgment of his marriage.

However, in spite of the attempts made by these authors to overcome previous weaknesses in the study of the working wife, they have fallen short of their goal on a number of counts. For example, their first criticism pointed out that men have been neglected in previous studies. They did include men in their own study, but the men and women interviewed were not married to each other. Although the authors suggest that responses would have been the same had married couples been interviewed, they seem to be basing this suggestion on the assumption that the responses tapped are randomly distributed in the population sampled. In order for this assumption to hold, one must also assume that men and women randomly marry each other. This assumption completely ignores known patterns of mate selection (i.e., homogamy and complementarity) and the fact that marital roles are reciprocal in nature. Safilios-Rothschild (1969) has pointed out the dangers inherent in attempting to generalize on "the family" through information collected only from the wife. The converse would also seem to hold, namely that one cannot generalize on the basis of husbands' responses only. In other words, Orden and Bradburn have not solved the problem of "wife only" research; they have simply modified it.

A second criticism made by Orden and Bradburn was that a hazy conceptualization of economic necessity as a reason for the wife's working had led to the ignoring of socioeconomic class differences in perceived need in research on the working wife. They propose to combat this problem by allowing the respondent to reply to the question "Would you (or your wife) work if you (or she) didn't need the money?" We would suggest that, in contemporary American culture, this is an "are you in favor of sin?" type of question. On page 400 of their article, the authors offered the following interpretation for the fact that a lower-class male may perceive more tension in his marriage if his wife works out of necessity: "A man interprets his marriage role in terms of his ability to provide for the economic needs of his family. The fact that he cannot support his family without his wife's help is

a threat to his perception of himself as a husband and father." This interpretation seems to suggest that the authors are aware of a norm in our culture which says that women should not work if it is not financially necessary for them to do so, yet they base a very substantial part of their analysis upon responses to a question which they imply will place the male respondent in a very bad light!

Table 3 is based upon the question, "Would you work if you didn't need the money?" The responses are broken down according to (1) husband-wife responses, and (2) educational level. At least two weaknesses emerge from this table. First, in some cases very large percentage differences can be observed between responses coming from husbands and those coming from wives, yet no attempt is made to explain these discrepancies. Second, it would appear that the identical question was asked of respondents having an eighth-grade education and those who are college graduates. Does identical wording of a question insure identical interpretation by respondents of vastly different educational levels? For example, it may be an entirely hypothetical situation for a woman with an eighth-grade education to assume that her husband will ever earn enough so that she doesn't have to work, whereas the choice may be very real for the woman with a college degree.

The authors categorize working wives as those who work by choice and those who work out of necessity. Although they note that women may also remain in the home either through choice or lack of choice, they state that they have no information which would enable them to know whether a woman is in the home due to choice or necessity. The sweeping generalization is therefore made that "in general, women who are in the home are there by choice." We suggest that by making this generalization the authors have introduced a serious source of error into their analysis. In their conclusion, they state that "since the freedom to choose among alternative life-styles is clearly an important variable in predicting happiness in marriage, efforts to extend this freedom should have positive effects on the marriage happiness of both husbands and wives." If "freedom of choice" is one of the main variables affecting marital happiness in regard to the wife's working or not working, why is it logical to assume that freedom of choice is not equally important to the woman in the home market?

MARGARET POLOMA
THOMAS GARLAND

Case Western Reserve University

REFERENCE

Safilios-Rothschild, Constantina. 1969. "Family Sociology or Wives Family Sociology?" *Journal of Marriage and the Family* 31 (May): 290.

THE AUTHORS REPLY

Garland and Poloma state correctly that men and women do not marry randomly. However, they appear not to understand the aims of the method

of sampling used in our paper. The question that we are asking is as follows: If a wife is chosen at random from the population of wives in households, what are her working characteristics and what is the relation of those characteristics to marriage happiness? In responding to items about her husband, the wife is clearly referring to her own husband, and the fact that he is not in the sample of husbands is irrelevant. Similarly with respect to the sample of husbands, one is asking about the characteristics and attitudes of a randomly selected husband from the population of household-dwelling husbands. For both samples, the requirements of probabilistic selection are satisfied.

Garland and Poloma suggest that "the authors are aware of a norm in our culture which says that women should not work if it is not financially necessary for them to do so." Clearly, they have missed the major thread of our argument. We believe that there is a norm that the husband should provide financial support for the family. Our research leads us to believe that there is no norm concerning the choice a woman should make if it is not economically necessary for her to enter the labor market. Quite the contrary. We contend that a woman's *freedom to choose among alternative life-styles is an important predictor of marriage happiness.* In general, when a woman enjoys the freedom to choose between the home market and the labor market, the labor market choice is associated with a higher balance between satisfaction and tensions for both husbands and wives. However, on another indicator—the individual's own assessment of the marriage—there is little difference in marriage happiness either for husbands or wives between marriages in which the wife chooses the labor market and those in which she chooses the home market. This suggests to us that home-market workers entertain certain commitments and responsibilities that are as meaningful to them as the employment commitment is for women who choose the labor market, and that the important variable is the freedom to choose among alternative life-styles.

Garland and Poloma ask whether identical wording of a question insures identical interpretation by respondents of vastly different educational levels. We do not know. However, our intention was not to insure that respondents would give identical interpretation to the question, "Would you (or your wife) work if you (or she) didn't need the money?" Our intention was to allow respondents to answer in terms of their own perception of need. We contend that "the middle-class woman's need to supplement her husband's income may be as real to her as the lower-class woman's need to meet her family's basic requirements for food, clothing and shelter." Our intention in asking all respondents the same question was to allow for qualitative differences in the perception of need at different class levels.

Our critics state that it may be entirely hypothetical for a woman with an eighth-grade education to assume that her husband will ever earn enough so that she doesn't have to work. Our data suggest that Garland and Poloma have underestimated the speculative powers of these women. In our sample, 64 percent of the women in the labor market with an eighth-grade education

reported that they would *not* work if they didn't need the money, 34 percent said they would work.

Garland and Poloma contend that the question we use to distinguish between women who have a commitment to their employment and are in the labor market by choice and women who are in the labor market only out of economic necessity is an "are you in favor of sin?" type of question. We assume by this that they mean they would be surprised to find anyone reporting that he was in favor of sin. If, however, it turns out that 55 percent of the respondents are for sin and 45 percent are against sin (as is the case in response to our question), and if this distinction then turns out to be an important discriminating variable on a dimension the research is designed to measure (again, as is the case in marriage happiness), then we would argue that "are you in favor of sin?" is a damn good question!

Garland and Poloma say that we make the sweeping generalization "in general, women who are in the home are there by choice." We would like to point out that before we make this generalization we state on page 393: "Ideally, it would be desirable to make a comparable distinction between women who choose to center their activities in the home and those who are there reluctantly. However, in the absence of data to make this distinction, we consider these women as a single group. We assume that, in general, women who are in the home are there by choice." We then go on to detail the economic indicators on which we base our assumption: "In periods of high levels of economic activity and relatively low unemployment, it seems reasonable to assume that women who choose to work will generally find employment opportunities and make the necessary arrangements. The year 1963, when our study was in the field, was a year of high economic activity. The gross national product was $583.9 billion, an increase of $27.7 billion over the 1962 level; the unemployment rate for women was 6.5 per cent compared with 6.2 per cent in 1962; factory sales of passenger cars totaled 7,638,000 an increase of 10 per cent over 1962 levels." We further qualify this so-called sweeping generalization by saying: "We recognize that the assumption that married women have free access to the labor force in a full-employment economy is an oversimplification. On the supply side, there are undoubtedly restraints to freedom of entry imposed by the woman's education, her stage in the life cycle, her own and her husband's attitudes toward 'working wives,' the availability of adequate substitute help, and her own personality, disposition, needs, and desires. On the demand side, there may be restraints to free entry imposed by employers as well as by male incumbents in the labor force."

We conclude this discussion by indicating the direction of the bias we introduce by making the assumption that women in the home market are there by choice. "To the extent that wives in the home include reluctant recruits who would prefer to be in the labor market, they would tend to understate the marriage adjustment of the group as a whole."

Susan Orden
Norman Bradburn

University of Chicago

Book Reviews

The American Occupational Structure. By Peter M. Blau and Otis Dudley Duncan. New York: John Wiley & Sons, 1967. Pp. xvii+513. $14.95.

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The American Occupational Structure reports the most extensive empirical investigation of occupational mobility ever conducted. Because of the quantity and quality of data collected and the imagination and thoroughness displayed in the analysis of these data, this study will undoubtedly be recognized as a classic in its field.

The data for the study were collected in March 1962 as an adjunct to the monthly "Current Population Survey" of the U.S. Bureau of the Census. The information was obtained by means of a "leave-behind" questionnaire which respondents were asked to fill out and return to the regional headquarters of the Bureau of the Census. Complete questionnaires or follow-up interviews were obtained from 20,700 respondents which represents 83 percent of the CPS sample. This sample size permitted types of analysis that are not usually possible in sociological research.

A wide variety of analytical techniques are used in the study. It represents one of the first major applications of path analysis, but frequent use is also made of other multivariate techniques including regression, multiple-classification analysis, and Guttman-Lingoes smallest space analysis. The authors often use several different statistical techniques, involving different assumptions about the data, in the test of a single hypothesis. An additional example of the thoroughness of the analysis is the frequency with which alternative explanations are offered and tested.

The basic model developed in the book includes five variables: father's educational attainment, father's occupational status, respondent's educational attainment, status of respondent's first job, and status of respondent's occupation in 1962. Father's occupation and education are treated as determinants of respondent's education, first job, and occupation in 1962; respondent's education is treated as a determinant of his first job and his 1962 occupation; and the first job is treated as a determinant of the respondent's occupation in 1962. This conception of the "process of stratification" thus has the advantage of including within the same model both intergenerational and intragenerational mobility, which are usually analyzed separately although they are clearly not independent. Evidence offered throughout the book supports the authors' contention that this model includes the major determinants of occupational achievement at least for the bulk of the U.S. population considered in the aggregate. In later sections of the book the model is elaborated to incorporate such other variables as race, geographical mobility, farm versus nonfarm background, attributes of family of origin, marital status, and fertility. In the concluding chapter of the book the main findings of the research are summarized, and some of their implications for social stratification are discussed.

This study offers better evidence than has previously been adduced in support of some common propositions in the literature on social mobility. Blau and Duncan demonstrate, for example, the semipermeability of the

white-collar–blue-collar and blue-collar–farm-class boundaries in the sense that there is upward mobility but limited downward mobility across these boundaries. Throughout the study they demonstrate the importance of education as a determinant of social mobility in American society. They show the predominance of short moves either up or down the occupational status hierarchy in the course of intergenerational mobility. Their data indicate that there is still a high level of upward social mobility in the United States resulting from expansion of opportunity at the top and the availability of rural migrants to fill positions at the bottom of the urban status structure. They demonstrate that the cumulative disadvantages for the American Negro create a vicious circle with respect to occupational achievement, which begins with the fact that education does not produce the same career advantages for Negroes as for whites. Negroes are therefore more inclined to leave school early, thus reinforcing stereotypes resulting in occupational discrimination which decreases the returns from educational investments and lessens the incentive to make such investments.

The book also contains many new findings that should stimulate considerable additional research in the area of social mobility. It shows, for example, that the vicious circle of poverty does not apply to all underprivileged people in our society since, with exceptions which include the American Negro, the adverse effects of low social origin are not cumulative and are not the major determinants of differences in occupational achievement. Concerning the effects of migration, Blau and Duncan demonstrate that "the place in which a migrant grew up exerts a more pronounced and more consistent influence on his occupational chances than the place in which he now works." With regard to sibling position in the family, their data indicate that both oldest and youngest children have more successful careers than those in intermediate positions. Data bearing upon a variety of obstacles to occupational achievement suggest that "men who have successfully overcome obstacles to their advancement are more likely to progress to still higher levels of attainment than those who had never to confront such problems." The frequently advanced hypothesis that class differences in fertility result from the association between low fertility and upward mobility can be unequivocally rejected on a basis of Blau and Duncan's finding that the "additive effects of occupational origin and present occupation may account for fertility, with the experience of mobility itself playing no role." This book is so rich in important findings that it is impossible to do more than illustrate the type of results obtained.

Because *The American Occupational Structure* is so clearly an excellent book, I am tempted to forego the part of the reviewer's role which calls for the expression of "reservations." The only reservations that occur to me concern things that might have been done in addition to what appears in the book, and, since these may be seen as suggestions for future research, I will mention just a few.

Despite the title of the book, it deals to a much greater extent with factors affecting the distribution of people along the occupational status hierarchy than with the economic, technological, and other factors affecting the distribution of jobs along this hierarchy. These two types of distributive processes are clearly interrelated, and an understanding of both is necessary in order to understand social mobility. Cyclical economic fluctuations, for example, affect the number of jobs of various types that are available. When

comparisons of father's occupation and respondent's occupation in 1962 are interpreted as representing *patterns* of upward or downward mobility, questions may be raised regarding the effect of the prolonged period of prosperity that had existed at that time. We know from studies of career patterns that for many people in some occupations the occupational trajectory is neither generally up nor generally down but fluctuates depending, in part, upon the state of the economy. We need a companion volume to the Blau and Duncan work that would be an equally careful and thorough study of the factors affecting the structure of occupational opportunity.

Another question that might be raised has to do with the meaningfulness of the national occupational prestige hierarchy on which much of the analysis in *The American Occupational Structure* is based. Research showing the stability of these prestige ratings over time and across cultural boundaries indicates that occupational status differences are meaningful in the sense that people are aware of and can articulate them. There is, however, a substantial body of research suggesting that occupational achievement is not a central concern for what may even be a majority of people in the labor force. Social status that enters in as a determinant of behavior is assigned in much more circumscribed social systems than is reflected by a national occupational prestige hierarchy. The values used in status assignment in the community, neighborhood, work place, friendship group, and family clearly mediate, at least, the impact of occupational status differences. The circumstances under which the difference in status between U.S. Supreme Court justices and shoeshiners enters into the everyday experience of people remains an open question. The significance of this fact for mobility research is that explanations for the correlates of mobility frequently assume that the occupational prestige hierarchy has important motivational consequences. Study of the specific conditions under which work-related values affect the status assignment process would make an important contribution to our understanding of what Blau and Duncan refer to as the "process of stratification."

There are many promising research directions suggested by *The American Occupational Structure.* One of the major contributions of this study is that it provides a secure base of knowledge from which we can now move into new areas of research on occupational mobility.

Sociology and History: Methods. Edited by Seymour Martin Lipset and Richard Hofstadter. New York and London: Basic Books, 1968. Pp. vi+423. $7.95.

Leo Schnore

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"Over the past decade," according to this book's dust jacket, "the concepts and methods of sociology have been extensively applied to the study and writing of history. *The Sociology of American History* series offers a comprehensive and authoritative guide for gaining an understanding of how such sociological approaches have been fruitfully applied, the methods best suited to certain types of historical problems, and the pitfalls and opportunities which the social sciences reveal to the historian. . . . The first in the series,

this volume presents the sociological techniques actually employed by leading scholars in the field. It illustrates the enlarged frame of reference and the wider range of methods now at the disposal of the historian." These claims turn out to be the only guide to the intent of the volume, for the absence of a preface or guiding editorial remarks on its contents shifts the entire burden of interpreting its overall purpose and the reason for the inclusion of each chapter to the hapless reader. (Lipset's chapter 2 does have a brief section on methods [pp. 29–33] in which three of the chapters are summarized in one paragraph each.) The individual chapters are not grouped in sections, nor are they given even the most cursory editorial introductions. There is no obvious logic to the order in which the various chapters appear, and the individual contributions cover an extremely wide variety of substantive topics—including nationalism, congressional factions, philanthropy, American values, religion, and corruption—without any common themes emerging. At the same time, fully a half-dozen of the chapters deal with political topics; exclusive attention to politics might have given some unity to an otherwise disparate array.

All but three of the sixteen chapters are reprints of previously published materials, and all but five are by professional historians. Two political scientists and three sociologists (Lipset, E. Digby Baltzell, and Paul F. Lazarsfeld) are represented. Seven of the chapters are reports on completed research, illustrating research techniques or exemplifying the use of particular bodies of data, while the other nine are mostly general essays *about* research. Among the latter are the three original contributions—by Hofstadter, Lipset, and Samuel P. Hays—together with essays by Stephan Thernstrom (on quantitative methods), Barnes F. Lathrop (on the research utility of manuscript census returns), Lee Benson (on the inadequacies of Charles A. Beard's design of proof), Eric L. McKitrick (on the need for the historical study of corruption), Thomas C. Cochran (on the desirability of "a social science synthesis" rather than continued reliance upon periodization in terms of presidential administrations), and Lazarsfeld (on the utility of opinion polling data for studies of the recent past and for historians of the future).

Without knowing the reasons for their inclusion, I found the substantive research reports much more interesting and informative than the various exhortations and programmatic statements. An outstanding example is "New Perspectives on Jacksonian Politics" by Richard P. McCormick; he uses simple state-by-state estimates of voter turnout (proportions voting among those eligible) for the presidential elections from 1824 to 1844 to demonstrate the grave fallacies in the popular interpretations of "the new democracy" commonly assumed to have arisen with the emergence of Andrew Jackson. It is noteworthy, however, that McCormick manages to carry through his entire analysis without reference to a single sociological concept. And the calculation of simple percentages is certainly not a specialty somehow belonging to "sociological methodology," for all of its frequent usage by sociologists. McCormick's work, then, is *not* an illustration of a historian's use of a sociological approach or of specifically sociological techniques; it is simply a thoroughly competent and carefully documented piece of myth busting, and it might have been done just as well by a person trained in political science.

Some of the other substantive research reports leave the distinct impres-

sion that it is altogether futile to characterize whole disciplines today by reference to their supposedly special methods of investigation or presentation of data. A few examples will suffice. Bernard and Lotte Bailyn provide data on the ownership of Massachusetts vessels, 1697–1714, by place of residence and occupation of the shipowners. If they demonstrate nothing else, they certainly reveal that the presentation and discussion of simple descriptive statistics can remain as dull, boring, and meaningless in the hands of a historian as in the clumsy grasp of a sociologist. In his opening chapter, Hofstadter himself echoes the common claim that "historians are repelled by the texture of sociological writing" (p. 11) and holds that "it is probably true that in history a smaller proportion of the bad writing sees the light of day" (p. 12), but he has reprinted the Bailyns's turgidities, and—what is far worse—he has seen fit to print a (deservedly) unpublished paper by Hays, a wandering discourse that is replete with absolutely incomprehensible (and multidisciplinary) jargon. At the same time, this volume suggests that historians have no monopoly on purely descriptive narrative. The sociologist Baltzell's chapter on "Religion and the Class Structure" is as gracefully overwritten, tedious, and conceptually empty as any contribution by a historian.

Actually, two of the most solid and useful research reports in the volume are not by historians or sociologists at all; they are by political scientists. One of them, Richard L. Merritt, examines "The Emergence of American Nationalism" by means of a careful content analysis of certain trends in the news columns of four randomly selected issues per year of newspapers from each of five colonial cities from 1735 to 1775. It is interesting to observe that he thinks of content analysis as a "method of communication research" (p. 140) and not as a "sociological method" per se. Fred I. Greenstein, a professor of government, suggests that the sociologist Leo Lowenthal's well-known content analysis of trends in the characteristics of heroes in popular magazine biography has been extremely misleading. Greenstein provides a secondary analysis of survey data (from 1902 through 1958) based on questions directed to children and adolescents concerning their heroes. He vividly demonstrates the shallowness of the dubious interpretations of "changing American values" and shifts in "social character" popularized by David Riesman and William H. Whyte, Jr. Although written by a historian (David Donald), another excellent chapter uses two bodies of data that have become very popular with quantitative political scientists—voting statistics and congressional roll calls. Working with materials from 1864 to 1867, Donald effectively demonstrates "that Radicals usually represented the most heavily Republican districts in the state [New York], that Moderates came from marginal districts where some Democratic support was necessary for victory, and that Conservatives were the temporary congressmen from districts whose normal affiliation was Democratic" (p. 255). Similar results were found in all of the other northern states, and Donald concludes that "Moderates had to check extreme Radical proposals or be defeated in the districts they represented. . . . The history of Reconstruction legislation is the story of the tug of war between these two groups, and, like the basis of factionalism, it can best be analyzed in quantitative, almost mechanistic, terms" (pp. 266–67). Again, as interesting and suggestive as these findings may be, they were not achieved by employing "the concepts and methods of sociology," to use the language of the dust jacket. To be

blunt, I do not believe that there are *any* "methods" unique to sociology. The situation may be rather different, however, with respect to "concepts," where sociologists have been quite innovative; here they may be very helpful to historians. Presumably the remaining volumes of the "Sociology of American History" series will provide examples of the utility of sociological thinking in dealing with historical problems. On this assumption, I look forward to reading the second book in the series—a reconsideration of the famous frontier hypothesis set out by Frederick Jackson Turner.

One other chapter in the volume under review merits specific mention in connection with the use of sociological concepts. In "Anatomy of Giving: Millionaires in the Late Nineteenth Century," Merle Curti, Judith Green, and Roderick Nash "had hoped to ascertain fairly accurately at least the major amounts donated by millionaires and to correlate type and magnitude of gifts with biographical variables" (p. 275). The latter refer to what a sociologist would probably label as "social statuses," although it is clear that very little would be gained by mere changes in terminology. The findings, however, are of potentially great sociological interest: "In our sample *neither sex, place of birth or residence, religion, family* [presence or absence of children] *or education had more than a slight relationship to the decision of millionaires to donate to philanthropic causes.* . . . The only variable which seems to have had a pronounced influence on the propensity of a millionaire to be a philanthropist was the method by which he acquired his fortune. *The 'self-made men' in the sample were much more philanthropic than were those who inherited their wealth*" (p. 282). Now it might be argued that such a methodological exercise—linking "biographical variables" (social statuses) to social behavior—is an intrinsically sociological enterprise. If that is true, however, a great deal of the output of present-day social science, together with much of that of history itself, "is" sociology. Only a Comtean view of the functional positions of various academic disciplines could comfortably accommodate such intellectual imperialism.

But if we sociologists are no longer intent upon building empires, how should we regard making common cause with other disciplines? Alliances and exchanges are probably most easily effected where there are common frontiers; the long-term interest on the part of sociologists in social change in general and in such particular macroscopic processes as urbanization and industrialization (both neglected in the volume under review) probably guarantees a continued sociological market for the empirical products of the research historian. It may also turn out that such things as our own discipline's recent interest in "the sociology of economic development" will begin to yield longitudinal analyses that are of some interest to at least a few historians. The hazard of common boundaries, however, lies in the possibility of border disputes. In the academic world, these are to be seen in such clashes as those over the admission of new courses to the curriculum. Trivial as they may seem, such incidents may be subject to escalation.

This brings me to one final consideration: the pedagogical utility of the Lipset-Hofstadter collection for historians and sociologists. Where might it be used? It is also available in paperback, and I suppose that those few sociologists who teach "historical sociology," and the growing number of historians offering courses in "social history," might employ it as a textbook or as a supplementary source. Courses in historiography or research methods in history might also constitute another and somewhat larger market,

although the book's heavy emphasis on political topics may be a limiting factor. But the main limitation on the utility of this volume is its profound thematic weakness; it is simply a conglomerate of already available materials, untouched by editorial hands, and thrown together without any discernible organizing principle. The flood of such unintegrated "readers" continues to flow from the book publishers—and from our more industrious and well-read colleagues. Confronting such patchwork, one is simply tempted to paraphrase the English nobleman who reacted so strongly to yet another volume by the historian Edward Gibbon: "Another damned thick square book! Always scissor, scissor, scissor, scissor!" Eh, Mr. Lipset? Eh, Mr. Hofstadter?

Latent Structure Analysis. By Paul F. Lazarsfeld and Neil W. Henry. Boston: Houghton Mifflin Co., 1968. Pp. 294. $9.50.

David J. Armor

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For years many sociologists, especially methodologists, have been looking forward to a more extensive treatment of latent structure analysis. Lazarsfeld and Henry have provided just that in the present volume. Their work goes far in giving solutions to a wide range of special and general cases of latent structure analysis. Unfortunately, they have not offered an adequate conceptual foundation which can guide researchers in applying the techniques. Moreover, the mathematical treatment is so extensive and in many instances so advanced that the average sociologist will have a difficult time understanding the book.

The first main chapter presents the basic ideas of latent structure analysis by considering the simple case of two latent classes. The motivation for this case stems from the classical situation of controlling a two-way relationship for a third variable. Given, say, a 2×2 table which shows association between the two attributes x and y, a third variable (also with two levels) can be introduced as a control. If the original relationship largely disappears in the two subtables, we can say that the third variable "explains" the relation between x and y. In two-class latent structure analysis, the "explanatory" or control variable is unknown. Instead, given a set of dichotomous attributes or items (three or more are required), it is assumed that there are two latent classes within which there exists no second-, third-, and higher-order associations. By making these assumptions, it becomes possible to estimate the characteristics of the two latent classes. The characteristics consist of two sets of parameters: (1) the relative sizes of the latent classes; and (2) for each item the conditional probability, given membership in a class, that a person would respond positively to the item. These probabilities make it possible to classify respondents on the basis of their response patterns. The classes can be interpreted by considering those items which have the highest response probabilities, and, if the interpretation is satisfactory, the classes can then be used for further analysis as an independent of dependent variable.

The remaining chapters consider various generalizations of this basic model, as well as numerous computational forms for all of these models.

The generalizations include extensions to cases of three or more latent classes, to ordered classes (where the latent classes fall on a single ordinal continuum), and to the case of continuous latent space (where the classes fall on a single interval continuum). There is also a chapter on the case of items with more than two response categories ("latent profile analysis"). In all of these chapters illustrations and examples using real data take a back seat to mathematical derivations. Many of the illustrations utilize hypothetical latent models derived to show various properties of the technique.

The most important question for the researcher is what he gains by applying latent structure analysis and which of those gains are unique to this method and which gains are more easily realized by applying other methods. The authors should have spent more time on this issue, especially because of the complicated nature of many of the computational problems in latent structure analysis. On the surface, it appears to be most closely related to factor analysis or some of the more recent multidimensional nonmetric scaling methods. All of these methods aim to reduce the number of items in some domain to a smaller and more manageable number of dimensions before relating the domain to other variables in the analysis. The authors do point to the similarity of latent structure and factor analysis, but they feel that their method has three advantages: (1) it has no rotation problem; (2) it makes use of third- and higher-order associations; and (3) it is specifically designed for dichotomous items and so does not depend upon correlation coefficients.

It is not clear that these advantages outweigh some of the disadvantages of latent structure analysis. Most recent factor analysts see rotation more as a convenient way to represent factor spaces, rather than as an end in itself. And dichotomous items present no real problem for factor analysis; even the present authors define and use the concept of covariance for dichotomies, scoring items with the values 0 and 1. This leaves the issue of making use of higher-order association. Actually, the authors themselves seldom make use of anything higher than third-order association, and many of their examples and computational forms use only second-order association (i.e., pairwise correlations). Moreover, it remains to be seen whether third-order association is really present to a significant degree in much of the data used in this kind of item analysis (e.g., attitude or personality data). Errors of measurement in these data are often such that linear models exhaust practically all the observable association. At any rate, the authors did not attempt to show empirically that, in fact, third-order association is such a problem that latent structure analysis is necessary.

On the other side of the ledger, there are some serious practical problems with latent structure analysis. It is not clear that multidimensionality is adequately handled. A class is not a single dimension in the sense of factor analysis; in the two-class, the ordered, and the continuous cases only one dimension is assumed. The general case of nominal latent classes can handle more than one dimension, but it appears that it is harder to decide on the number of dimensions in this case than it is in factor analysis. But a more serious problem concerns the number of conditions under which solutions do not exist. It was very difficult keeping track of all of them; they seemed far more numerous than those in factor analysis. For example, various solutions do not exist (1) when the latent conditional probabilities for an item are equal across the latent classes; (2) when certain two-way associations are 0;

(3) when the relative size of the latent classes approaches 0 (the authors actually say that it fails when a latent class is empty, but, apparently, if it is not empty but close to 0, some of the latent probabilities come out *over* 1, and the solution has to be rejected). In my experience, a factor analysis solution is always available for a real correlation matrix.

Considerably more attention will have to be devoted to the conceptual foundations of latent structure analysis, as well as its computability and applicability, before it can become a viable method in competition with other existing multidimensional scaling techniques. There is a good chance that this volume will stimulate that effort.

Islam Observed: Religious Development in Morocco and Indonesia. By Clifford Geertz. New Haven, Conn.: Yale University Press, 1968. Pp. 136. $5.00.

Douglas E. Ashford
Cornell University

Islam Observed is a study in comparative religion based on Professor Geertz's 1967 lectures for the Dwight Harrington Terry Foundation. Although I am unfamiliar with the preceding thirty-six volumes in the series, Yale's benefactors (or their offspring) have been well rewarded. Geertz writes with clarity and charm on an immensely complicated and ambitious subject. His work is rooted in the comparative religious views of the functional social theorists and their progenitors, but has a lucidity and persuasiveness that few of them have achieved.

Geertz also goes beyond his predecessors in his analysis of symbols, a task he had already contributed to in his essay in *Ideology and Discontent* (New York: Free Press, 1964, pp. 47–76). No doubt he is more at ease in the comparative religion context, for *Islam Observed* conveys more clearly the premises and methods of his approach than the earlier essay. While he still rejects both psychological and sociological interpretations of religion, the new book deals more explicitly with the problems of comparing symbols, and the materials drawn from his Moroccan and Indonesian field experience show how contextual analysis of symbols is done.

The choice of Morocco and Indonesia is not fortuitous. The first chapter on the two cultures outlines the social and attitudinal tensions that contributed to such different manifestations of Islam in the two countries. In Morocco Islam became activist, rigorous, and dogmatic in the power struggle of a religiously endowed sultan and similarly endowed warrior saints. Religious symbols entered into politics and society in explicit, individualized form, and continue to do so to this day. Islam in Indonesia was syncretistic, reflective, and theatrical. Religion, much like politics, became a public spectacle.

The second chapter amplifies these thoughts in a discussion of two myths, linked to the institutional forms which Islam used to envelop each society. Indonesia developed into a "theater state" under Dutch rule, where Islam utilized the emergent market network. Morocco experienced centuries of competition between the brotherhoods and, most recently, the

Alawite dynasty. In this chapter, as in most others, Geertz digresses to elaborate his contextual approach to religion.

The third chapter deals with the role of Islam under the fierce secular pressures of recent decades. In Morocco it became the one social and political force the French could not claim as their own. The interplay of religious values changed very little in the contextual sense, although the number of players increased. The attempts to reinforce religious symbols through fundamentalist reform failed in each society because, as Geertz points out, both the Salafiya movement and Sarekat Islam placed a priority on purification and scripture that effectively detached Islam even more from the doubts and fears of secularizing societies.

Geertz would probably disdain being linked to a method, but the last chapter of the book raises methodological questions that relate to many recent issues raised in the analysis of society and politics. He clearly asserts the semantic foundations of his approach but adds a time dimension and a concern for contextual validity that is shared in different ways by a number of social scientists. For him, semantic analysis no more abandons experience than working-class studies ignore power structure. There is ever-growing awareness of the statistical corollary of his views in the attempt to find ways of utilizing critical path analysis and multiple regression to improve the contextual, and even causal, reasoning of social analysis.

He rightly points out that there is nothing contrary to empirical research in studying how beliefs formulated prior to experience indeed relate to continued experience. Those of us interested in radical protest and revolutionary action abroad, and sharing these concerns for our own society, would do well to examine Geertz's work carefully. The analysis of how symbols interact to structure individual existence and social events has wide application in contemporary society. Those who would like a highly readable and suggestive analysis of this kind should study Geertz's book.

Interaction Ritual: Essays on Face-to-Face Behavior. By Erving Goffman. Chicago: Aldine Publishing Co., 1967. Pp. 270. $5.75.

Everett C. Hughes
Boston College

Five previously published articles, starting with "On Face-Work," make up the first half of the book. "Where the Action Is," a new contribution based on observations of gambling, makes up the last half.

Earlier in my career I kept notes for a general sociology which I might write. One of the themes was to have been that of risk; men create risks for each other, then build institutions to standardize, exploit, and spread them by various devices, some of which are called "insurance," others, "manners," "law," "kinship," etc. Goffman has dealt with risk in a number of ingenious analyses in these essays. Men threaten each others' person and face but allow each other to live—sometimes—to do likewise another day. Order is broken and restored. Konrad Lorenz (*On Aggression* [New York: Harcourt, Brace & Company, 1966]) describes the same ritual between a goose, her gander, and a rival gander. The goose makes a pass at the rival, then sidles close to her own gander so as to force him to make aggressive

gestures against the rival; thus he proves he loves his own, true goose and is worthy of her love. Goffman and Lorenz work in the same way; they observe with aggressive intensity the behavior of their subjects in situations, or occasions. Observation of this measure of intensity is indeed a threat to the face of the observed subjects, if they are moral beings. Laden with guilty, embarrassing knowledge, Goffman saves the face of all who are content to let themselves be considered normal, fallible human beings. Those who cannot take his analysis are no doubt tempted to do away with him and, perhaps, with all sociologists. Those who can take it, will find their minds flooded by free association, with embarrassing memories from their own experience, and with corroborating incidents.

Once in a while, as I read Goffman, I say to myself, "Why does he not refer to [let us say] J. Mark Baldwin?" Then, on the next page, he does refer to J. Mark Baldwin. Goffman knows the classic statements on social interaction, and cites them adequately, not effusively.

The new theme in the book is that of taking chances, against both mechanical and social odds. Taking his material from various kinds of gambling and from conduct that is called deviant, he develops a vocabulary and a mode of analysis of action. "By the term *action* I mean activities that are consequential, problematic, and undertaken for their own sake" (p 185). The other terms in the definition are defined and illustrated. What Goffman does not do, except by hints, is to apply his analysis to the standard, ongoing, and approved enterprises and activities of society: the diagnosis of disease (other than mental) and the decisions and action of treatment and surgery; the purchase of stocks of goods for sale in the future; the decision on a profession and a course of study; the mutual choice of marriage mates. It may be that Goffman will not himself put his methods of observation and his scheme of analysis to that use. Others should try it. The essence of his method is close observation and the reporting of behavior in "small" but dramatic and fateful situations, which he then extrapolates to larger systems of things in a sophisticated but not quantitative way. In this sense, all of his work is directed toward problems of method.

Institutions and the Person: Essays Presented to Everett Hughes. Edited by Howard S. Becker, Blanche Geer, David Riesman, and Robert S. Weiss. Chicago: Aldine Publishing Co., 1968. Pp. 372. $11.75.

Philip Pochoda

University of Pennsylvania

The reign of a great leader of a tribe has been celebrated, or terminated, in diverse rituals. Historically put to death by his followers, now, in a less heroic age, he is more frequently subjected to a *Festschrift.* In this way, private feelings of esteem and intellectual debts can be publicly acknowledged while still deferring to the twin professional exigencies of impersonality and publication.

Everett Hughes is fortunately still going strong, despite symbolic interment by the latest example of this genre, *Institutions and the Person,* a collection of papers by many of his former students. Hughes has produced a lifetime of exemplary work in sociology, unmatched for its scope, grace,

humanism, and methodological refinement. Additionally, it is clear from this book, he is responsible, at least in part, for the training of a significant cadre of distinguished contemporary sociologists. If ever a man merited honor as a leader and a prophet within a discipline, Hughes easily qualifies.

The editors of this volume arrange the contributions within five areas in which Hughes did ground breaking or creative labor. They call these "The World of Work," "Racial and Cultural Contacts," "Organizations," "Institutions and the Person," and "Problems of Method," each of which is itself allocated five papers. The overall intent of such precise organization is to testify to the range of Hughes's interests and contributions, to display the continuity between his work and that of his students, and, especially, to demonstrate how his original insights and methods have been applied, improved, and expanded in a variety of theoretical and empirical contexts. And, to be sure, such an endeavor is appropriate for a man of Hughes's stature, whose influence has radiated through the whole sociological profession.

Unfortunately, whatever the private values derived and communicated by these authors from their personal relationship to Hughes, the public merit of this book, upon which it must be judged, is disappointing—whether measured by the accomplishments of Hughes himself, the outstanding achievements of many of these authors, or by other current work in several of these areas. This book, in short, provides neither the measure of the man nor of a field of scholarship. Despite its self-conscious internal architecture, it emerges as a potpourri of occasional pieces or finger exercises, several printed first elsewhere, few of more than passing interest, and united mainly by chapter headings.

The best section in the book—and in this there is a measure of justice—is the group of papers treating institutions and persons. Blanche Geer provides an important, complex, and lucid analysis of the relationship between institutional structure and personal motivation in the teaching profession. She thereby fulfills in exceptional fashion the often-repeated but seldom respected injunction to elucidate the simultaneous social and individual components of institutional complexes. Fred Davis contributes another, and an especially useful, paper deriving from his continuing investigation of the socialization process as exhibited by novitiate nurses. Anselm Strauss, proving the virtue of brevity and clarity, offers a short paper introducing a series of necessary distinctions within the gross concept of status passage—an analysis which may prove to have wide application.

In the last section on methodology, a small gem by Erving Goffman is included, which, in brief compass, maps out implicitly the intellectual route from George Herbert Mead through Goffman himself to contemporary sociolinguistics. Herbert Gans, in a series of afterthoughts to his participant-observer studies, provides serious and sophisticated commentary on his own provisional solutions to the tensions and dilemmas encountered in such situations. Rarely have the problems of individual accommodation to professional behavior been so carefully and revealingly presented.

Finally, however, this book, like the proverbial Chinese dinner, mainly leaves one very unsatisfied a short while after finishing it. The elements of a great feast—genuine good will, intellectual craftmanship, and a worthy figure to be honored—are all present. But, it must be asked, is a smorgasbord of some rather cold cuts the proper homage to a master chef?

Kinship and Social Organization. Edited by Paul Bohannan and John Middleton. Garden City, N.Y.: Natural History Press, 1968. Pp. xiii+391. $6.95 (cloth); $2.50 (paper).

Marriage, Family, and Residence. Edited by Paul Bohannan and John Middleton. Garden City, N.Y.: Natural History Press, 1968. Pp. xi+411. $6.95 (cloth); $2.50 (paper).

Peter Stone

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These two bound collections are part of a new series of "American Museum Sourcebooks in Anthropology." As such, I suppose they qualify as "nonbooks." This is unfortunate, since the term in popular usage has become pejorative. Without exception, all of the selections in these two sourcebooks represent a consistently high quality of original work—many are already recognized classics. Until now, there have been no anthologies exclusively devoted to the work of social anthropologists in kinship and family studies. Since the editorial efforts of Paul Bohannan and John Middleton now enter an open field, it would only be gratuitous to say they were the best of their kind. They are, in fact, quite good. In paperback the books are a bargain. Even so, with a little more work, they could have been much better.

In both books the editors' introductory comments are confined to three pages. By far the better of these pleasant and informed chats is the introduction to *Marriage, Family, and Residence.* Here the editors claim that their "selections are well-known for obvious and right reasons" (p. x), while further on they acknowledge that "one-sided our selection undoubtedly is, but we think it is the kind of one-sidedness that any editor faces, not the grinding of axes or projection of our own points of view" (p. xi). This is hardly informative. It does, perhaps, serve as a weak apology for not having made known and obvious their reasons for choosing these selections. I find the distinction between being one-sided while not grinding axes about as useful as a one-sided ax.

In *Kinship and Social Organization* the basis of selection is wholly unmentioned except for the title and the section subtitles. All too often editors fail to make their own positions known. When an editor's point of view is unambiguously presented, the reader himself can be the judge as to just how one-sided the editor has been. Sometimes through ignorance, indifference, or malice, a writer may neglect to mention a similar or contradictory article by someone else. These unfortunate sins of omission or commission are not always readily apparent, and they are often useful to know. The editors should have provided their readers with this information. Surely this could not be construed as "the grinding of axes." To this point I should add that both books come with appended bibliographies in which the editors have conscientiously listed every source cited in their selections.

Kinship and Social Organization may be seen as a kind of key to the scriptures for much of today's social anthropology. Although there are still some British social anthropologists who prefer to think of themselves as sociologists, most American sociologists who have turned to the literature of social anthropology must already harbor some suspicion that anthropologists take a perverse pleasure in describing and analyzing kinship terminol-

ogy for itself. Many of the selections in this book will undoubtedly confirm this suspicion.

Sociologists have made some pioneering contributions to the study of kinship. These efforts, however, have done little to alter the division of travail in which kinship (as opposed to family) studies have remained anthropologists' work. Even when Parsons (1943) discovered a "symmetrically multilineal type" kinship system, it appeared in the *American Anthropologist*. In a sense, the work of Davis and Warner (1937) also represents this tradition. Interestingly enough, this collaboration appears in the book under review (pp. 61–91).

The editors chose twenty-four selections, which they divided into five major parts: (1) "Historical Landmarks in the Study of Kinship"; (2) "Unilineal Descent"; (3) "Non-unilineal Descent"; (4) "Bilateral Systems and the Kindred"; and (5) "Some Special Problems in Social Organization."

The distinction between "Non-unilineal Descent" and "Bilateral Systems" is both subtle and complex. Unfortunately, the selections in these two parts rarely make the distinction in the same way. More often than not, they fall back on typological neologisms of their own invention. When read back-to-back, the total effect of these selections is not without its educational value. Most readers should come away from this experience with a clear notion as to just how confused social anthropology is about anything but unilineal descent.

In simply listing the publication dates of the seven "Historical Landmarks" (1871, 1909, 1937, 1929, 1937, 1956, 1964), I begin to wonder about the nature of landmarks and history. It would seem that the editors feel that during the first fifty years following Morgan's (1871) monumental tome, the study of kinship remained an American monopoly (Morgan 1871, Kroeber 1909, Lowie 1929) and (thus ?) crept along at two landmarks per half-century. Far from being the British Dark Ages, this period witnessed such brilliant landmarks as the original *Kinship and Social Organization* by W. H. R. Rivers (1914) and "The Mother's Brother" by Radcliffe-Brown (1924). The selections by Goodenough (1956) and Lounsbury (1964) on the linguistics of kinship may yet prove to be landmarks, but are they now historical? Perhaps the editors believe that if anthropology is not history it is nothing.

Marriage, Family, and Residence does not raise the issue of history: the oldest selection in this book is by Lévi-Strauss (1943), and today both the article and the author are still *au courant*. Considering the ponderous concern of the Victorians with the family (in all of its savage and civilized forms), I think the editors were wise to salvage what they could from the last quarter-century. Perhaps the word "salvage" is too strong, but only ten years have passed since Goode (1959) somewhat bitterly allowed that "from *Gemeinschaft und Gesellschaft* to the present, theorists of the first rank wrote no major work on the sociology of the family" (p. 179). Not to be outdone, Bohannan and Middleton conclude in their introductory remarks that "the field is very long and very wide, and, it would seem, very shallow" (p. xi). That these two declarations of *mea culpa* come from such first-rank authorities is discouraging, to say the least. I can only say that most of the selections in this book are quite interesting and I recommend them for whatever they may be worth. I should think the selections by Aberle et al. (1963), Gough (1959), Spencer (1959), and Spiro (1954), included in this source-

book, would make it an excellent choice for "family" courses taught at any level.

Twenty selections on the family and/or familial problems are divided into six parts: (1) "Incest and Exogamy"; (2) "Marriage"; (3) "Marriage Forms"; (4) "The Family"; (5) "Residence and Household"; and (6) "Some Special Problems." Most of these headings are self-explanatory. The editors note that ". . . it is the arrangement of families in space—usually called 'residence patterns' by anthropologists—that is one of its most important features" (p. x). I suppose this could be freely translated into sociology as "ecology." The distinction between "Marriage" and "Marriage Forms" may rest on the difference between substance and form. In any case, it is fun to think about.

Human Communication Theory: Original Essays. Edited by Frank E. X. Dance. New York: Holt, Rinehart & Winston, 1967. Pp. x+332. $7.50.

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A dozen social scientists from various disciplines review their fields in terms of the contribution made to the study of communication. Some of the fields included are anthropology (Dell Hymes), neurophysiology (Mary Brazier), philosophy of language (John Searle), psychiatry (Joost Merloo), psycholinguistics (Fodor, Jenkins, and Saporta), speech (Robert Oliver), and sociology (Hugh Dalziel Duncan). Some of the reviews go over ground covered by the same authors in other publications; nonetheless, it is useful to have them together in the same volume.

Kaarle Nordenstreng recently noted that American communication research is suffering from a tendency toward "hyperscience" (*Gazette: International Journal for Mass Communication Studies* 14, no. 1 [1968]: 207–16); this tendency is also apparent in *Human Communication Theory,* particularly in the editor's own contribution, which attempts to develop a theory of human communication. The best chapters are those in which the author is free from the preoccupation of discipline building. Dell Hymes wrote a remarkably clear and succinct statement on the interrelations between anthropology and communication. Fodor, Jenkins, and Saporta summarize work in psycholinguistics concretely and imaginatively. Jack McLeod's piece, now probably overshadowed by William McGuire's massive chapter in the Lindzey-Aronson *Handbook of Social Psychology* (Reading, Mass.: Addison-Wesley, 1969), is a useful summary which concludes with a list of unsolved problems.

Hugh Duncan is the only sociologist represented. His article restates arguments he raised in *Communication and Social Order* (Totawa, N.J.: Bedminster Press, 1962); he pleads effectively for sociologists to develop "theory, method, and technique that will make possible the study of the social effects of communication" (p. 262), suggests that technicians have dominated theoreticians, and expresses the belief that among the younger generation of sociologists there is a revived interest in symbolic behavior and theory. Duncan also wrote the last chapter, "Works on Symbolic

Analysis that Related Form to Social Content," an important annotated bibliography. The editor, unfortunately, neglected to provide an index.

College Curriculum and Student Protest. By Joseph J. Schwab. Chicago: University of Chicago Press, 1969. Pp. vii+303. $4.95.

Donald N. Levine
University of Chicago

Student activists have been depicted as zealous followers of parental values, as sociopaths acting out against defenseless institutions, as pioneers of a new subculture, as hapless participants in an international social movement, as eternally provocative youth made destructive by an ineffectual parental generation, as a saving sane remnant in a world berserk with technology and fear. What all these interpretations share is an acceptance of the phenomenon of contemporary student unrest at its face value, as a historical given. Consequently, they lead to proposals for dealing with this given: how to control, promote, deflate, or adjust to student protest.

Joseph J. Schwab, by contrast, gets beyond the bare facticity of such accounts to look at potentialities. Most student protesters are neither pathologically hostile nor very creative. They are, rather, scandalously *underdeveloped,* just like the much greater number of students who remain silent. They enter college ready to develop competences but are deprived of means to do so. The effect of remedying these privations will not be to quiet, tolerate, or adulate student protest but—incidentally— to civilize it and render it more effective.

The rhetoric of this book is thus explicitly clinical. It treats student protest as a body of presenting symptoms, surveys resources available for their treatment, and offers a series of specific prescriptions that draw on these resources and aim to ameliorate the ills identified. The privations in question include (1) lack of opportunity for discovery, assay, and exercise of basic intellectual competences; (2) ignorance of defensible grounds of morality and of the complexities of decision making; (3) ignorance of the variety of lives that can be led and the full range of human satisfactions; and (4) lack of a sustaining communal life. The burden of responsibility for overcoming these wants rests with the faculty, and Schwab is quick to name the sins of irresponsibility hallowed by existing academic practice: "Through operations like student government we make fools of students. Through opaque electives we demand and celebrate nonrationality of decision. Through the demand for ungrounded early commitment to specialization we mislead and encourage the student to mislead himself . . ." (p. 15).

The ensuing lists of curricular resources and prescriptions defy summary. They comprise a tough-minded manual, each page crackling with insight and studded with hard-won wisdom. Above all, they are clearly designed for use: how to cultivate the arts of recovery, articulation, inquiry, and moral choice; how to present the college teacher as exemplar of a discipline yet not as a pied piper; how to balance the claims of students' diversity of interests and competences with the need for shared language and experience. Among the more ingenious prescriptions are those for involving students in the examination process, constructing "overarching disciplines,"

and discussing curriculum itself as an integral part of the college program.

What Schwab is saying, in effect, is that the solution to a psychosocial problem in our colleges must be in good measure a cultural one. For certain reasons, which he fails to analyze, our patterns of transmitting culture to preadults are no longer adequate. It is no longer viable (whether or not it was *ever* intellectually defensible) to present the natural and social sciences as a "rhetoric of conclusions." It is no longer viable to gloss over the whole domain of practical culture as represented, for example, in arguments concerning the possibility and scope of a moral intuition and the actual deliberations of judges and policy makers.

Sociologists will find the book's concluding chapter, "The 'Community' Prescriptions," of particular interest. Revitalized culture is not enough: here one considers the roles and social relationships that undergird the new curriculum. These prescriptions are based on a discrimination between structural imperatives (e.g., the precedence of collaboration over brotherhood in collegiate sociality) and functional equivalents (e.g., different ways of attaining collaboration)—what Schwab, in plainer language, calls the "immovable" and the "movable" facts of the case.

To the critical sociological sensibility, Doctor Schwab's prescriptions must appear incomplete. The full set would have to include remedies for the crippling resistances which keep faculty from considering, let alone pursuing, the treatment of choice. In focusing on student protest as an educational problem, moreover, he deliberately avoids the "given" issues of student activism: how to respond to the legitimate content of protest, how to handle the illegitimate forms which that protest often takes. One wonders if the two sets of issues can remain separate for long. There are, alas, movable and immovable facts of the case outside the ivy walls. The forms of rebelliousness and repressiveness produced out there cannot be excluded from the diagnosis if this tonic vision of the collegiate community is to be a truly redeeming one.

The Dynamics of Compliance: Supreme Court Decision-making from a New Perspective. By Richard M. Johnson. Evanston, Ill.: Northwestern University Press, 1967. Pp. x+176. $5.95.

Law and Equal Opportunity: A Study of the Massachusetts Commission against Discrimination. By Leon H. Mayhew. Cambridge, Mass.: Harvard University Press, 1968. Pp. 313. $7.95.

Erwin O. Smigel

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In these days when the principle of "law and order" is questioned by some and its rigid enforcement demanded by others, studies which explore the law's effect as a catalyst for social change and as an agent for social control are most welcome. In separate volumes, Johnson and Mayhew do just that. The important issues in the sociology of law which their studies raise are not new. However, the demand for solutions to our social problems lends immediacy to the determination of the part law plays in many social-action

equations. If the role of law could properly be appraised, its usefulness as a basic force in solving a number of these problems would increase.

Johnson's book has a sociopsychological flavor because opinion and attitude change and cognitive theory are stressed. The author studied the implementation of a U.S. Supreme Court decision concerning religious practices in public schools, choosing two small homogeneous communities in central Illinois as the locale for his research. Religion played an important and influential role in the life of both villages. Prayer was part of the daily school routine. Johnson's exploratory study examines the factors which led to compliance with the Supreme Court ruling banning this practice in the schools. He describes in detail the unique characteristics of the Supreme Court which made compliance easier to achieve. He also describes the role of the school supervisor who, following the dictates of the court, prohibited daily prayer in his schools. The implementation of a decision, according to Johnson, depends not only on the powers of the court but also on the behavior of the "relevant actors" on the local scene.

Mayhew's work is a sociological study of antidiscrimination laws. He attempts to estimate the effect of these laws on behavior. Mayhew spent a year in Boston investigating the Massachusetts Commission against Discrimination and its accomplishments during the years from 1959 to 1963. He found, surprisingly, that it is more difficult to enforce laws against discrimination in the area of employment than in housing. The author believes that, in order to obtain racial harmony, appropriate, but not yet generally accepted, values must become institutionalized. The theory of institutionalization, which is central to his thesis, is defined as "a process of establishment, a process whereby some norm that was fluid, undefined, honored in the breach, unknown or undeveloped, becomes regularly followed and a part of the structure of social life." The researcher used this theory in an attempt to answer the question, how does the ideal of equality (the value) become an institutionalized norm?

Both Johnson and Mayhew found that law does have an effect as an instrument for social obedience. Their findings, unfortunately, are inconclusive. This is to be expected, if only because of the purposely limited nature of their research. In addition, as they both discovered, it takes more than the law itself to explain why, and under what conditions, law can be used as a special force for social change. The Supreme Court has legitimate power as recognized by law, by precedence, by the length of its existence. However, the Civil Rights Commission had to earn its legitimacy. Both organizations used persuasion, conciliation, influentials, communication, and symbolic reassurances in attempting to implement its directives. Both refrained from the use of coercive and expert power; both exhibited understanding of the emotional content of the problems involved.

For both organizations, power is based on moral right, which implies the obligation to obey. The people who absolutely refused to comply with the laws in question denied the legitimate power of the respective organization. The adamant citizens in Illinois expressed the belief that religion in the schools was within the jurisdiction of the local authorities, while some businessmen in Boston felt that the federal government had no right to involve itself in their personal hiring practices. Those who espoused the rulings fully supported the legitimate power of the governmental bodies, as did those who had private doubts but publicly complied. In Johnson's book, the

power of the influentials is made explicit. Once the superintendent of schools decided to comply with the Supreme Court decision, there was little community controversy. However, to make acceptance of the ruling more palatable, silent prayers were allowed. Even when the ruling was not considered personally appropriate, it was believed that there should be public compliance. This acquiescence indicates that, despite the strong religious orientation in the villages, law prevails when it is seen as legitimate.

If the shift toward increased militancy and greater hostility to authority along with growing self-determined polarization between groups persist, then it is quite possible that the meaning of law will also shift. In an epilogue to his book, Mayhew predicts that while law will continue to play a role in "establishing a minimum standard of equal treatment," its meaning will have changed. Our ability, then, to rely on the law as a tool for obtaining social control and change will have been damaged.

People and Plans: Essays on Urban Problems and Solutions. By Herbert J. Gans. New York: Basic Books, 1968. Pp. xiii+395. $10.00.

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The city planning movement had its start in a historical period much like that of the present, at least as seen by those who lived at the time. In the late nineteenth and early twentieth century our cities were being overrun by immigrant hordes from strange peasant societies. Our cities were crowded, without beauty, and growing in seemingly aimless ways at high rates. Furthermore, they were dangerous politically: some immigrants brought socialist ideas with them; others moved to the Left as a result of the immigrant experience. Urban disorders led to the erection of castlelike armories in many cities, built in preparation for anticipated states of siege. City planning was part of the answer to the problems of those troubled times. Regulate growth, promote architectural and landscape beauty, provide parks and open spaces, create neighborhood centers, and life in the city would be more like life in the smaller towns of the country where the "healthy" strains in American life flourished.

Now in the last half of the twentieth century, the social problems of the cities are still with us. The city planning movement, even where it did succeed in modifying the physical structure of cities, must be judged a massive failure. The master plans for our major urban areas have been graphic exercises in futility, their specific provisions for growth and structure being continually canceled by the demands of the real estate market. The social goals of city planning could never be achieved through planning because the planning movement, as Gans points out, was based on a false premise postulating close relationships between physical structures and social structures.

This collection of essays, almost all concerned with planning and urban social problems, represents a devastating critique of the planning movement. Herbert Gans points out that the relationship between urban social structures and urban physical structures is by no means as close as believed by city planners. But more important, the planners' ideas about social life are

based not on what people want but on images of what planners think people want and should have. The social philosophy of much city planning is based on nostalgic yearnings for a romanticized society of small towns and rural simplicity, and on a conception of urban neighborhoods as dominated by elementary schools as their central institutions. Individuals, families, and households show remarkable intransigence vis-à-vis their physical environments. Working-class suburbs are more working class than popular images of the suburbs, based on *New Yorker* short stories of ennui, wife swapping, cocktail parties, and oppressive conformity in the high-pressure suburbs of Connecticut.

Gans's essays on the poverty program are also perceptive and intelligent. Poverty, Gans reminds the reader continually, is fundamentally a matter of employment and income. Retraining programs aimed at placing people in occupations in which there are no job vacancies, enlargement of social services (and mainly social service payrolls at that), slum clearance, and many of the other panaceas of the War on Poverty are simply beside the point. The poor need jobs and income. The barriers of discrimination in employment and housing need to be lifted.

The collection of his essays in a single volume demonstrates that Gans has made important contributions both to urban sociology and to social criticism. Many of these essays have been hitherto unpublished and others have appeared in journals not easily accessible to sociologists. Despite the almost inevitable redundancies that appear in such collections, Gans's volume is a welcome and needed corrective to the concrete megalomania of city planners and the pathetic irrelevance of the liberal establishmentarian approaches to the problems of race and poverty.

The Delinquency Label: The Epidemiology of Juvenile Delinquency. By Victor Eisner. New York: Random House, 1969. Pp. xiv+177. $5.95.

Swaran Sandhu

Moorhead State College

The book expounds the findings of a series of studies in San Francisco between 1963 and 1967. The police and juvenile court records of offenders between the ages of 8 and 17 were checked. The sample included offenders from both sexes, as well as from various backgrounds—white, white-Spanish, Negro, Chinese, and "other." Eisner defines a delinquent to be "any person whom society labels as delinquent" (p. 21), and juvenile delinquency as a phenomenon that "cannot be equated with deviant behavior" (p. 6).

It is common knowledge that most juveniles are delinquent at one time or another. But some get referred to the parents or counselors by the police while others are apprehended. This discriminatory treatment, Eisner points out, is the outcome of the differential perception of the lower-class boys (particularly Negro) held by the police, on one hand, and the differential Negro values and attitudes, on the other.

Because of his epidemiological approach, there is a danger that the author may add to the existing social process of delinquency labeling with which he is concerned. However, his caution not only saved him from this eventuality but also exposed a noteworthy "logical error" in the delinquency

explanation. Note his words: "Epidemiology deals with populations, not with individuals. Membership of a high risk population does not necessarily mean that he is extremely liable to become delinquent; it means only that a high proportion of his group will" (p. 12).

Furthermore, he states very categorically that the data of his research are not conclusive in suggesting that differences in delinquency rates between the slum and nonslum areas of San Francisco are real. Rather, the data are more definitive in showing that delinquency labeling is far more common in the slum areas than in other areas.

Eisner's study is also a refreshing reminder of Liebow's *Tally's Corner*, and in some respects confirms that work. In San Francisco, the Negro boy—like his older counterpart in Washington, D.C.—quarrels over girls, is hostile to authority, expects discrimination, and is violently responsive when he finds it. This, of course, as Eisner aptly points out, is not going to keep him out of trouble with the police for long.

It is Eisner's position that white society and the police "defending" it on the "front line" may be too eager to "control" the young, even when their deviation from the law is imagined or slight, and that such overreaction (seen here as delinquency labeling) may encourage youngsters to take up their "assigned" delinquent roles. But no evidence is offered with regard to the hypothesis of assumption of the "assigned" roles. In general, the sociological interest of Eisner's points exceeds his success in demonstrating the validity of specific empirical generalizations. A considerable proportion of the demographic evidence offered does not speak to Eisner's most important ideas. Nevertheless, on balance, I, who share Eisner's view of the pervasive relevance of delinquency labeling for all aspects of the phenomenon, find that the author has more than come up to my expectations.

The Study of Policy Formation. Edited by Raymond A. Bauer and Kenneth J. Gergen. New York: Free Press, 1968. Pp. xxii+392. $9.95.

Francis X. Sutton
Ford Foundation

Professor Bauer describes in his preface the origins of this book in his collaboration with staff of the National Planning Association. They were considering ways a better job might be done in feeding useful information into the policy process. A thoughtful and instructive essay by Theodore Geiger and Roger Hansen included in this volume indicates some of the concerns that were present at its origin. They discuss the role of information in decision making on foreign aid. They trace the possibilities and prospects of enhancing the role of information in public opinion formation and executive branch and congressional decision making on foreign aid. The subject is one on which many people think that national policy would be better if more ordinary citizens, and more people in positions of power, understood better what the importance and significance of foreign aid is. The conclusions that Geiger and Hansen come to are, however, consistently negative. At no level or stage of the policy process do they see significant possibilities of an important difference that better information or better presentation of it would

make. Along the way, they have good suggestions about ranges of information that are neglected and the possible effects if they were brought to bear. (To the sociologist, their comments on the lack of systematic efforts in the United States and other aid agencies to use information on cultural, social, and political aspects of development will be particularly interesting, and their conclusions that more substantial attention to such information might cause morale problems in such agencies may be disquieting.) But in the end, they conclude that other matters—mostly of a cultural and institutional sort—seem to be more important in determining the course of the policy process.

There were probably other reasons for broadening the concerns of this study from information into a comprehensive and eclectic look at the policy process. But I felt myself wishing that the initial studies had given more encouraging estimates and that Bauer and his associates had kept to their original aim. The use of information in the formation of policy is an important practical subject, as anyone knows who has ever tried to put forward a recommendation or proposal. It is a topic that invites juxtaposition of experience from various fields and offers prospects of fruitful results from generalizing study. But Bauer and Gergen chose a wider generality, and not surprisingly, they were forced into a retreat from the formidable task of conceptual presentation and illustration of a unified view of the policy process to discussion of how research on it has been or may be carried out.

The book consists of a series of papers that were prepared to summarize various existing approaches to the analysis of policy formation and decision making, plus three case studies and an introduction in which Bauer manfully attempts to show the interrelations and coherence of the other chapters. He may be forgiven if the attempt is not successful for the material is very disparate.

The economists have their say in two chapters. Richard Zeckhauser and Elmer Schaefer give a kind of popularized account of normative economic theory in its relation to public policy formation. Bauer's colleague at the Harvard Business School, Joseph Bower, follows with a review of descriptive decision theory that many readers will find a stimulating account of an enormous range of work from the experiments of Mosteller, Coombs, Fouraker, and Siegel, through the work of Simon and his colleagues at Carnegie Tech, to Chester Barnard and Philip Selznick. Enid Schoettle then takes us on through the political scientists, and Kenneth Gergen offers a psychological perspective and a methodological essay. The case studies which close the book are only weakly related to what has gone before. One has already been mentioned. The other two are on urban mass transportation (by Lewis M. Schneider) and the problem of maximizing technological fallout from the space program (by Edward Furash).

The value of this book will no doubt lie where its editors suggest: as a convenient guide to a scattered set of efforts in research and thinking on policy analysis and decision making. The serious inquirer will not find himself content with what he learns here; he will have to follow the bibliographies and footnotes to works that may respond to his special interests or current intellectual need.

Social Order and the Risks of War: Papers in Political Sociology. By Hans Speier. Cambridge, Mass.: M.I.T. Press, 1969. Pp. viii+497. $3.75 (paper).

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When Hans Speier's collection of essays was first published by George Stewart Publishers in 1952, reviewer Howard Woolston for the *American Sociological Review* (17 [1952]: 517) lamented that points made by Speier would go unheeded. "Just now," he says, "we are so busy investigating deviators that we have no time to examine the value of our standards." This reissue by M.I.T. Press appears in a vastly different political climate, when many of our standards are indeed in question. Many of the ideas presented have a new relevance today.

As it stands, however, the book is an assembly of thirty-two articles, with major essays mixed in with reprints of book reviews. Although these are grouped under headings of "Social Structure," "Social Theories," "War and Militarism, and "Political Warfare," cohesion lies in the pattern of the man's thought rather than in any real organization of the book. This reissue appears at the time Hans Speier is completing more than two decades of active social science leadership at the RAND Corporation. Rather than just a reissue of essays dating from the late 1920s up to 1951, I wish that a carefully edited and annotated selection could be done, including selections from his more recent writings. Such would be a needed documentation and a fitting tribute to a distinguished social science career.

Given the large literature in political sociology and related topics being published these days, there also remains the task of concisely putting these ideas into the context of today's problems and today's literature for the more casual reader. Many of the essays were written with the specter of Germany in the 1930s and 1940s at hand. Students who do not have first-hand acquaintance with this period may not be equipped to make a translation to the current situations themselves.

Empirical Theory of Democracy. Edited by Charles F. Cnudde and Deane E. Neubauer. Chicago: Markham Publishing Co., 1969. Pp. 534. $7.50.

Kenneth Prewitt

University of Chicago

This is a collection of well-known selections from the writings of Dahl, Lipset, Cutright, Rokkan, Miller, Stokes, McClosky, etc., which intends to establish that "something approximating an empirical theory of democracy has already emerged from the many individual and piecemeal attempts at its construction" (p. 2). Of the twenty-two selections, half were published between 1965 and 1967, and only two prior to 1960. Nearly half (ten) are reprints from the *American Political Science Review*. I mention these facts to underscore that the moderately well-read political scientist or political sociologist will be directly familiar with a majority of the articles and no doubt indirectly familiar with the remainder, and also to hint that the shape of an

emerging empirical theory of democracy is linked to very recent work. Since another year's worth of articles undoubtedly will lead to major revisions, I am less sanguine than are the editors with regard to the enterprise of establishing the "emerging theory." But this consideration aside, it is heartening to read through the collection. Progress is being made in understanding one of the most elusive questions in political theory, and the editors are to be commended for so clearly spelling out where we might be headed.

However, the editors have failed us in a few respects. Most glaringly, they ignore a growing empirical literature which is calling into question the effectiveness of elections as a means for holding officials accountable for their actions. The book seems firmly in the grasp of Carl Friedrich's notion that the "law of anticipated reactions" is what makes democracies work. That the editors fail to make note of the literature critical of this assumption is particularly surprising since they do reprint from Edelman's *The Symbolic Uses of Politics*, but they make no mention of where else in this work Edelman presents a major challenge to the assumption that elections hold American officials accountable. The editors thus let stand unchallenged what may eventually prove to be a weak link in the chain of untested assumptions which give foundation to the empirical work on democracies.

Since the selections are so familiar, to review them in this space would be useless and probably foolish. Thus we are left with what is new, the summary chapter by the editors. I read this chapter with great reward and am more informed on a tough question for having done so. I do, though, disagree with much of what they say. By way of introducing the editor's summary, I suggest the following exercise. The reader should sit down with *Empirical Democratic Theory* and read it straight through, then distill from the material an "emerging empirical theory of democracy." I daresay that nearly as many theories will emerge as there are readers who attempt the exercise, which is to say in a backhanded way that the theory derived by the editors is less a product of the selections in the book and more a product of their own thinking about democracy. This is not by way of criticism, except possibly to chide the editors for asserting that their summary chapter "integrates" the material in the volume. It does not, as indeed no chapter probably could. What it does do is propose a theory which, though not inconsistent with most of what the preceding chapters have reported, deserves to be carefully studied in its own right.

Cnudde and Neubauer suggest that the theory which subsumes many of the points made in the reprinted materials says that "mildly autocratic-democratic patterns are inherently unstable." Nations regress toward the extremes, either toward greater democracy or toward greater autocracy. They elaborate on this notion with imagination and, in passing, make a substantial contribution to the continuing study of apathy/mobilization and stability/instability. Although finding fault with the central points in the chapter, I do strongly recommend it to the student of democratic systems. With what do I disagree? For one thing, although they claim to be theorizing about democracy, the editors come closer to theorizing about stability and instability. They attempt to solve what is a confusion in the literature regarding democracy and stability by arguing that, since the two covary, it is feasible to incorporate both dimensions in the same theoretical framework. Even if one agreed with the empirical assertion about covariance, it is questionable whether theorizing is advanced by failing to separate

the persistence of a type of government from its form. Second, the hypothesis with which they work is not falsifiable, or at least not easily so. What evidence could falsify a theory which states that any nation arrayed along a democratic to autocratic continuum is moving toward one or the other poles of that continuum? Only instances of nonmovement, I suppose. And such are difficult to find. But arguments with the summary chapter at the level of grand theory should not obscure the usefulness of their careful and insightful treatment of several important middle-range findings about democratic nations.

Political Order in Changing Societies. By Samuel P. Huntington. New Haven, Conn.: Yale University Press, 1968. Pp. xii+488. $12.50.

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The thesis of this book is stated in the aphorism: "Modernity breeds stability, but modernization breeds instability" (p. 41). The thesis is both polemic and scholarship.

As polemic, it is an effective critique of those policymakers, principally American, who operate on a very different hypothesis, called "dogma" (p. 6) in their case. Samuel Huntington is certainly one of the most widely read and balanced commentators on order and change that the American academic world has produced. Basically a conservative, he understands that in the modern world the only society that can be conserved (is necessarily worth conserving?) is one in which most of its members participate and one in which there is some just division of the rewards, and hence one that most of its members will consider worth conserving. The secret, he feels, lies in the institutionalization of politics, the criteria of which he lays out quite explicitly in the opening chapter. And the key institution of modern politics is the political party. This book is a paean to the virtues of the party.

As scholarship, the book is essentially one long theoretical statement or, rather, a series of discrete and loosely linked hypotheses, illustrated by references of varying length and detail, and occasionally backed up by correlations of cross-sectional data. History—of individual countries or of the world system—is either absent or is represented by a small and schematic segment of the possible longitude. In short, Huntington uses the style of structural-functional analysis that has dominated American sociology and political science in recent decades.

His forte is the apt and often illuminating aphorism. I cite some of the better ones: "Today America still has a king, Britain only a Crown" (p. 115). "Divided societies cannot exist without centralized power; consensual societies cannot exist with it" (p. 125). "The triumph of the revolution is the triumph of party government" (p. 315). "The political function of communism is not to overthrow authority but to fill the vacuum of authority" (p. 335). "The most effective method of reform is the combination of a Fabian strategy and blitzkrieg tactics" (p. 346). "Reforms directed at the urban middle class are a catalyst of revolution; reforms directed at the peasantry are a substitute for revolution" (p. 369).

However much I am bemused by Huntington's probity, I am dubious about his underlying philosophy and critical of his scientific method.

The underlying philosophy is, as he clearly indicates from the outset, one in favor of political stability, one that regards political order as a legitimate and desirable goal per se. It is this per se element that leads Huntington to be remarkably sympathetic to Communist governments about whom he says: "They may not provide liberty, but they do provide authority; they do create governments that govern" (p. 8). In a brief comparison between opposing regimes in Vietnam and Korea, he concludes: "The difference between north and south in both countries was not the difference between dictatorship and democracy but rather the difference between well-organized, broadly based, complex political systems, on the one hand, and unstable, fractured, narrowly based personalistic regimes, on the other. It was a difference in political institutionalization" (p. 343).

How far he pushes the per se may be seen in his even-handed rejection of the principal traditional views of the public interest: those defining it in terms of abstract values (such as natural law theories), those defining it in terms of specific interests (such as Marxism), and those defining it in terms of a competitive process (classical liberal or Bentleyite). Instead, Huntington boldly asserts: "The public interest . . . is whatever strengthens governmental institutions" (p. 25). And even more remarkably, ". . . the legitimacy of governmental actions can be sought in the extent to which they reflect the interests of governmental institutions" (p. 27). To all of which, I can only ask the ancient question, *cui bono?* For Huntington, with all his classical allusions, the question is apparently irrelevant, or else he thinks it is patently clear that a strong government is a good government. It is not so clear to me.

But it is the scholarship which is the point of the book, and criticism should center there. The main criticism to make is that Huntington has not written a book. Bound volumes of notes have been published so frequently of late that we scarcely notice anymore. To be sure, Huntington's notes are often argued with brilliance and panache, but the hard work of turning these notes into a coherent, carefully argued, integrated statement that seeks to account systematically for order and change in modern societies is yet to be done.

A good example of the problem posed by Huntington's unfinished efforts is the following argument: "In the 1960s, an Iran or an Ethiopia could use a Stolypin, and in Latin America there was perhaps room for a Nasser in Haiti, Paraguay, Nicaragua, or even the Dominican Republic. But the rest of the continent was simply too highly developed for such an attractively simple panacea" (p. 229). Perhaps this argument is valid; it is certainly unreliable. I challenge anyone to tell me, on the basis of this statement, whether Burundi needs a Stolypin or a Nasser or neither.

Nonetheless, these notes are mandatory reading for those working in the problems of modern social change. They can all profit from Huntington's insights. It is more doubtful that this book should be offered to undergraduates with their well-known propensities either to take tentative hypotheses for accepted theorems, or to reject these hypotheses out of hand because some of their implications seem too conservative, or too radical, or too something.

Social Mobility in the Caste System in India: An Interdisciplinary Symposium. Edited by James Silverberg. The Hague: Mouton & Co., 1968. Pp. 155. Gld. 20 (paper).

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Social Mobility in the Caste System in India is an interesting interdisciplinary symposium of papers whose impact and importance have been diminished by an eight-year delay in publication. While mobility and change within the Indian caste system are no longer exciting new topics, this collection does add important new data, and its appended discussion and interpretive conclusions point out the many serious problems that remain, both for theoretical construction and for first-hand research.

To me the most interesting in the volume are the three data papers. William Rowe succinctly and competently documents how the Noniya caste of salt makers has made claim to the higher status of Cauhan Rajput. They have risen "well above the untouchable line" (p. 68), and "leaders of all castes point to the Noniyas as having risen in the caste hierarchy" (p. 77). Rowe also notes that the young elite of this caste seems to be turning from activity directed toward mobility within the system (Sanskritization) to modern political activity. The implication is that it is no longer worthwhile to try to move in the caste system because the system itself and the bases for rank and power in Indian society are changing. This is again suggested in Edward Harper's paper on an unsuccessful movement, if it actually can be called a movement, among the untouchable Holerus of south India. The paper, based on historical documentation and first-hand field work, concerns itself more with the movement from slave, to indentured contract, to wage labor types of intercaste relationships during the past 200 years, than it does with attempted mobility within the caste system.

Mobility of Shudra families and individuals, not of their whole caste, to high ritual status within temples of the Shrivaishnava sect in medieval south India is the subject of a fascinating paper by Burton Stein. (Stein, a historian, is the only outsider in this "interdisciplinary" symposium of anthropologists and sociologists.) The egalitarian ideals of Ramanuja, the founder of the sect, gave way, however, to the power of Brahman ritual specialists and the rulers of the Vijayanagar Empire. Thus, Shudra ritual specialists in the temples were pushed out and their mobility aborted.

The other three papers of the volume are theoretical. Bernard Barber presents a valuable overview of how and why the static, textual, and normative view of the caste system arose, as well as how and why it has now given way to a processual, empirical, and contextual view. McKim Marriott theorizes that mobility can only be understood by placing a particular movement within one of the many frames of reference for ranking that exist in India, such as the rural versus metropolitan and the traditional varna versus modern national frames of reference for ranking. Y. B. Damle summarizes Merton's view of reference group theory and applies it to mobile individuals in India.

While this volume contains some excellent contributions to the documentation and understanding of the dynamics of Indian society, it is not really about mobility in the caste system, except for Rowe's Noniya Cau-

hans. The reasons for this arise from a number of inadequately made conceptualizations and distinctions. First, there is no clear or unitary agreement, at least for purposes of the symposium, on what the caste system is. This leads to a confusion which comes out clearly in the discussions where it is said that one of the problems in the study of mobility is to specify the units that move. If one is not sure of the units, then how much more unclear is his conception of the system under discussion? This confusion is also apparent in Marriott's paper, where he identifies many different frames of reference for ranking. If each of these frames of reference forms a system of stratification, how can they all be "the" caste system? If Marriott's rural and metropolitan ranking systems are different, then it is possible that the reason "some participants in these discussions feel that the caste system as a system is beginning to crumble, first and foremost in the cities" (p. 135) is because the caste system does not exist there. In urban India one is more likely to find castes but not the caste system.

This cavil about a working definition of the caste system is important because it bears on the book's main themes, mobility and the caste system. A certain ambiguity and inconclusiveness permeates the volume because mobility *within* the caste system is not really distinguished from change *of* the system. This ambiguity flows from two other inadequately made distinctions. Mobility is not distinguished from change. Change within or between castes does not necessarily constitute mobility within the caste system, unless one accepts mobility as the only significant kind of change in Indian society. As already noted, Harper's essay on the Holerus is descriptive more of *changes* in types of intercaste relationships and how these changes have come about, than it is of *mobility* within the system. As the editor, James Silverberg, points out, "Does not an enhanced power position in a political or economic context of analysis seem to constitute a more meaningful form of mobility by their [the Holerus] own current values than does their ordinal position in a ritual hierarchy" (p. 130)? The words "a more meaningful form of mobility" gloss over what actually appear to be changes in Indian society and not mobility in the caste system. This seems to follow from another inadequate distinction—that between the caste system and Indian society itself. Indeed, the whole volume is a contribution insofar as it forces one to look for a more adequate frame of reference than that provided by the caste system. The caste system alone cannot adequately account for the dynamic processes in Indian society which these papers give evidence of. Even as regards the caste system, the symposium was unable to break away from a narrow structural concern for ranking to a dynamic one of function and process. Caste is more than ranking, and Indian society is more than the caste system.

The Soviet System and Modern Society. By George Fischer. New York: Atherton Press, 1968. Pp. xii+199. $7.50.

Jiri Kolaja

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This publication is a joint project of the Bureau of Applied Social Research and the Russian Institute of Columbia University.

This is a study of 304 men and two women who held high party positions at some time during 1958–62 in the Soviet Union. Since this is a saturation sample, these 306 Soviet persons make up 70 percent of all top Soviet party leaders. According to whether persons served in economic jobs or in party positions for about four years, persons are classified in four categories, called dual executives, technicians, hybrid executives, and officials. A major finding is that the proportion of dual executives was 10 percent in 1958 and had grown to 17 percent in 1962. By definition the dual executives are persons who worked at least four years in economic jobs as well as at least four years in party jobs. The data also tell that social class membership and nationality are of no or small influence. The most important influence is education. Characteristically, one can read on page 99 that respondents who worked in engineering were men who were the least likely to go to party school. Interestingly, 65 percent of the dual executive positions were occupied by Russians, even though the whole sample had only 49 percent Russians.

On the basis of the increasing trend to have proportionally more dual executives, Fischer briefly reviews some Western and especially American studies of the power structure and entire social order. He proposes that American scientists tend to evaluate social changes in Russia from an American assumption that all societies would approach the pluralistic model of power, as approximately represented by the United States. Fischer questions this assumption by maintaining that other models also can be approximately developed and that the Soviet society is not necessarily bound by the Western example.

This investigation then does not cover only a Soviet society or political or social stratification but also raises problems of the sociology of knowledge. Fischer should be commended for looking at it within the latter viewpoint. However, when we follow this line of thought, we can well ask the following question: provided that this trend toward dual executives persists, is it not also a trend toward pluralistic values? Since persons have been trained and worked in economic as well as political institutions, do they not exemplify a variety of backgrounds? Likewise, one can ask if economics and party would persist all the time? Could we not get military and party background, or party and particular scientific specialities in combination? One should remember that the sample covers only five years. Nevertheless, our major point is that persons who combine at least two fields of activities according to their personal histories might be another variation of the pluralistic thesis.

The Common People: A Historical Study on the Social Life of Masses of Bagdad in the Eleventh Century. In Arabic. By Mohammed Fahad Badris. Baghdad: Al-Irshad Press, 1968. Pp. 416. $1.40 (paper).

Ayad Al-Qazzaz

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Most history books published in Arabic on the Islamic empire period deal, from a nonsociological viewpoint, primarily with Caliphates, Sultans, military leaders, and other members of the ruling elite. Scholars have neglected

the common, ordinary people (peasants, farmers, laborers, merchants, slaves, soldiers, and others alike) and their influence in the process of building and developing the empire. Only in the last decade or so have a few works been published that break this pattern. This new interest in the masses can be explained in part by the impact of the Western pattern of scholarship on Arab writers and, in part, and perhaps more important, by the development of the Arab nationalism movement in the area. The common man is regarded by the movement's ideology as the maker and the instrument of history.

The book originally was an M.A. thesis submitted to the University of Baghdad. Chapter 1 is the longest (84 pp.) and perhaps the most interesting. The author discusses in detail the "common people" concept and how it was used during the period in question. The concept denotes a class opposite to the "privileged few," which includes the caliphate and his relatives, the high officials in the state, ministers, military leaders, famous judges, people of noble origin, and a few men of letters who were closely associated with court. The "common people" category, called so for their large number, includes a whole range of types of persons. It is a hodgepodge category which covers not only slaves, peasants, farmers, and soldiers, merchants, professionals, but also thieves and others whose behavior is normally classified as illegal.

The heterogeneity of the revolutionary movement of the common people is of some sociological interest. The author suggests two general types: one, composed mainly of 'Ayareen and Shittar, was mainly directed against the government and the wealthy people; the other, made up of various types of common people, was directed against the foreign rulers dominant in this period. The latter group exhibited a great deal of patriotic and nationalistic feelings which motivate the common people to struggle and fight against foreign rulers. Both forms of revolutionary movements possessed some sort of military organization, with different ranks and responsibilities and with special patterns of recruitment.

The book was written by a historian whose major interest is descriptive and factual, with marginal interest in sociological analysis. Thus the book lacks the rigor and analytical comparative focus of a sociologist. Despite this, the book is a mine of information and descriptions which can be used by sociologists for theory building and hypothesis testing concerning the role of the masses in different countries.

Population and Political Systems in Tropical Africa. By Robert F. Stevenson. New York: Columbia University Press, 1968. Pp. 306. $10.00.

Maxwell Owusu

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Addressing primarily an anthropological audience, David Easton, a political scientist, noted in 1959 that "political anthropology" as "a subfield does not yet exist and will not exist until a great many conceptual problems are solved." Since then, to my knowledge, very few so-called political anthropologists have applied themselves to the problem of conceptual clarification and theory building. In fact most of us (including the author of the work

that is being reviewed here) seem to be interested in the establishment of valid generalizations in anthropology and in the discovery of regularities (aren't we all engaged in the scientific profession?), yet much of our effort, as Stevenson's book clearly demonstrates takes us back instead of forward.

Professor Stevenson's task is to show *convincingly* that in tropical Africa, as in other parts of the world, there is "a positive correlation" (p. 7) ("correlation," "conjunction," and "relationship" are used synonymously by the author) between high population density and state formation.

Stevenson criticizes Fortes and Evans-Pritchard for stating that "it would be incorrect to *suppose* that governmental institutions are found in those societies with the greatest densities. The opposite *seems* to be *equally* likely judging by *our* material" (pp. 7–8, my emphasis), and that there is no *necessary* connection between high political centralization and high density. For evidence Fortes and Evans-Pritchard use "a trio of low-density states paired against a trio of high-density" stateless or acephalous societies.

Fortes and Evans-Pritchard cite a number of instances, which indicate their awareness of the unrepresentative nature of their sample (e.g., "judging by our material"). In the absence of reliable data for which the variables—for example, precolonial population densities, centralized authority or its absence—are clearly discussed or operationalized, the editors of the *African Political Systems* (New York: Seabury Press, 1940) could only exercise caution with respect to demonstration of *presumed* relationship between population density and the type of political system.

Stevenson belabors the obvious, and misreads (sometimes, one suspects, deliberately) the editors of *African Political Systems* or ignores the important qualifications made by them.

Thus the phrase "hold together" as it appears in their statement, ". . . it is probably true that there is a limit to the size of a population that can hold together without some kind of centralized government" is supposed, according to Stevenson, to lead to "almost mystical *causal* hypothesis concerning the *process* of state formation" (p. 11, my stress). "Holding together" may mean simply "integration" of the political units, or the "stability" of the political system in question.

Stevenson seems unable to make up his mind whether he is criticizing Fortes and Evans-Pritchard over a claim they do not make, that is, (1) the origins (social, economic, demographic?) of state (in which case it would have been more profitable if he had reexamined the earlier formulation by Herbert Spencer and August Comte and others that the emergence of the state was the result of the increasing size and complexity of societies in which militarism was a major ingredient) or (2) over the relationship posited by Fortes and Evans-Pritchard between political power and authority and socioeconomic phenomena or social stratification.

Stevenson accepts Fried's point that the state emerges only in stratified societies and proceeds like his mentor to define type and nature of political system in terms of their functions (primary and secondary). The difficulty associated with defining or conceptualizing systems in terms of presumed or demonstrated functions is by now obvious. Thus Aro oracle of southeast Nigeria and its organization becomes a state in terms of functions (p. 231).

The wording of Stevenson is at times curious, as in the sentence, "the sample lacked representivity" (*sic*, p. 160) instead of, "the sample was not

representative." Stevenson's method is equally not without blemish. He makes the unwarranted claim that his table III "gives even a marked confirmation to the hypothesis that high density is *correlated* with state organization" (p. 163) after a faulty analysis of a couple of additional cases—the Bushman, BaMbuti pygmies, Hausa-Fulani, Ruandi-Urundi? Of course Stevenson admits that the figures for the additional food-gathering bands and some major indigenous states were from the colonial and not the precolonial period (Stevenson is careful about not confusing time levels!) and constitute inferential data of doubtful validity. Whatever the qualifications, a convincing case could hardly be made for a finding based, as Stevenson's is, on an argument that present population patterns or densities reflect those of the precolonial past.

Stevenson's conclusion, based on questionable method and data, that there is "rather impressive support for the hypothesis" does not impress me, I am afraid. In fact his position after a tendentious explication is not different from that of Fortes and Evans-Pritchard. If Stevenson's aim was to demonstrate convincingly *precise* relationship between population density and state, he succeeded in showing a very *general* relationship, which Fortes and Evans-Pritchard posit in the first place. To make his position *look* more scholarly, Stevenson had to *mis*translate Fortes and Evans-Pritchard's point that the relationship between density and state was "indeterminate" to mean "there was no relationship *at all*" (p. 223, my stress). Note that we are faced here with a $10 misrepresentation. The points raised by David Easton still remain to be explored by political anthropologists.

Motivating Human Behavior. By David C. McClelland and David G. Winter. New York: Free Press, 1969. Pp. xxii+409. $12.95.

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Psychologists McClelland and Winter have written a very important and honest book, which may mark a turning point in the conflict over psychological and sociological theories of entrepreneurship. The book is essentially a report on and evaluation of a series of "motivational training courses" which were organized by the authors and given to small groups of businessmen in the two South Indian cities of Kakinada and Vellore during 1964–65. Chapter 9, which seems to show that entrepreneurial success is not linked in any important way with religious behavior or fatalism, will be of interest to many readers. Of perhaps greatest interest to sociologists, however, will be the modifications in the authors' theories which resulted from their evaluation of the effects of these courses, in particular the authors' recognition of the importance of social structural variables. For example, it is stated in chapter 11: "The single most important factor determining where *n* Ach [need for achievement] training was effective turned out to be not in the training or in the individual, but in the participant's situation. . . . A man cannot convert increased motivation into increased activity unless he has a real opportunity to do so" (p. 311). Somewhat further on, in a discussion of the failure of *n* Ach training to benefit particular individuals, it is remarked: "The motivational training was not sufficiently strong to cause them to

break loose from their position in the social structure and find opportunities for themselves. Clearly those sociologists are right who, like Eisenstadt (1963) ["The Need for Achievement," in *Economic Development and Cultural Change*, vol. 4 (1963)], have argued that the achievement motivation research neglects social-structural variables" (p. 312). Given these and several other qualifications which the authors make, it seems clear from some of the results presented in this book that motivational training can make an important contribution to economic development.

In addition to the course participants, control groups from Kakinada, Vellore, and the nearby city of Rajamundry were also interviewed. The original project was to have been much more extensive and elaborate but had to be cut back because sufficient funding could not be obtained.

The development of motivational training courses for adults has resulted from a shift from emphasis on the development of motivation patterns in childhood to a focus on adults. In chapters 1 and 2 the authors give a careful review of *n* Ach research to date, particularly that research which has led them to the conclusion that adult motivation can be significantly changed.

It was interesting to learn that the authors' courses involved considerably more than teaching participants how to get high scores on tests for *n* Ach though this was the way the project had been reported to me by a number of Indians. Although something like this was an important (but somewhat misunderstood) part of the course, many other "inputs" were included. In chapters 3, 4, and 5 the rationale of the course is very well spelled out, along with near verbatim accounts of the way in which the courses were actually conducted. The presentation is convincing although much too complex to be effectively treated in this short review.

Briefly, the key concept behind the "motivational training courses" was that of the "*n* Ach syndrome," which was conceived of as an "association network" (p. 43). The problem of training was seen as moving the position of the "*n* Ach syndrome" upward in the individual's value hierarchy (p. 43). Participants were helped to understand the concept of *n* Ach by taking tests and learning how such tests are scored. Other course "inputs" were called "self-study" (S), "goal-setting" (G), and "interpersonal supports" (I). Self-study had among its aims that of helping the individual perceive that the development of a high achievement motive was required by the "demands of his career and life situation" (p. 59) and by his "ideal self image" (p. 61). Goal-setting exercises were designed to get the participants to set concrete, realistic goals, including (near the end of the course) an achievement plan for the two years following the course. Finally, the course sought to build "interpersonal supports," at least among the participants, and an "Entrepreneurs Association" was formed in both Kakinada and Vellore by course graduates.

Many ingenious means and devices were used in the courses, including prestige appeals of many kinds, such as the involvement of several high government officials, who had authority for granting licenses, etc. In Kakinada "every effort was made to get the senior business leaders to attend the first two courses" (p. 128). Talks were given to the class by outstanding entrepreneurs, and their factories were visited by the course participants. After completion of the course, each participant was visited approximately every six months to see how he was progressing toward the goals he had set in the course.

These follow-up visits were also used to help reinforce the motivation of the participants. In the last and most elaborate evaluation sessions, held in 1967, David G. Winter sought to interview every course participant and a matched control group in order to gain the most concrete impression possible of the "business activity level" of all individuals during the two-year periods before and after the course. Whenever possible, Winter sought to check for objective evidence (by visiting a new factory, for example), but he was almost totally dependent upon what each interviewee told him. It is unfortunate that budget cuts made it impossible to hire an economic-sociologist (p. 184) whose presence would probably have brought about a more rigorous economic evaluation and more cross-checks on information received, especially from the nonparticipants in the control group. Perhaps a larger budget would also have made it possible to match participants and controls more carefully. For instance, the controls in Kakinada and Vellore were drawn from persons who had expressed an interest in taking the course but who had somehow been prevented by circumstances or lack of interest from attending. The authors maintain that in most cases the circumstances were beyond the control of the individuals involved (p. 129). However, considering the way course participants were selected, especially in view of the attempt to get the "senior business leaders" to attend the first two sessions (p. 128), one suspects that the members of the control group were not really equivalent to the individuals who actually took the course.

For example, the tables on business activity show a conspicuous contrast between the high levels of performance (both before and after the training sessions) of participants in the first two Kakinada-Vellore sessions and the performance levels of those who attended the remaining sessions. Is it not reasonable to conclude that members of the control group, who were chosen after all the sessions had been completed, were still less ambitious and in an even less favorable position to expand or change than were the participants? One notices that the annual median gross income for all the control group members in Kakinada was only Rs. 110,000 as compared with Rs. 150,000 for all course participants in that city at the time the courses were given (table 4.1, p. 126). Moreover, one suspects that men in the control group, who only met the interviewers once for half an hour (except in Rajahmundry, where they had been interviewed once previously), were much less likely to have been candid about income from business or funds put into expansion than were persons who had been directly involved with the project for ten full days and who were contacted every six months thereafter. In my own recent research in India I found that, since much income was concealed to avoid paying taxes and because expansion was often partially financed by untaxed income, businessmen began to be candid about their finances only after rapport had been built up by repeated contacts.

It is also likely that the course participants would have wanted to oblige the interviewers by telling them what they wanted to hear. Participants would also be favored by the fact that through the course many of them became acquainted with highly placed government officials, who knew that outsiders were going to be checking in on things every six months and who may then have expedited licenses, permits for raw materials, and other government services, the acquisition of which is normally regarded as a major obstacle by all businessmen (pp. 104, 120). For all of these reasons,

the impressive tables presented to show the comparative achievement levels of course attenders and controls lose much of their luster.

The most impressive evidence for the success of the course in motivating achievement comes from the first three case studies presented by Sara Winter in chapter 10, and one would have liked to see more such cases presented. Mrs. Winter's evaluation of the course and the reasons for its limitations and effectiveness (pp. 304–8) is particularly well written and ought really to be read rather than this brief review. One of her important conclusions is that "the training courses did not achieve their effectiveness by deep-seated transformation of the motivation of participants. Rather, it appears the courses affected individuals by accentuating, building upon, or focussing potential for entrepreneurial activity which was already there" (p. 305). Although this is not exactly what the motivational training courses were intended to accomplish, it is still a significant accomplishment. The ingenuity and persistence demonstrated by the authors leads one to suspect that this potential will be put to further important use.

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Path Analysis and Ordinal Data[1]

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While path analysis has great advantages for bridging the gap between sociological theory and statistical analysis, a major obstacle is the requirement that interval scales be assumed for the data. This problem is attacked, first by investigating what theoretically *can* go wrong when interval scales are assumed, second by presenting a technique (the use of dummy variables) for checking on the results of assuming equal intervals, and finally by applying this technique to one set of empirical data. The conclusion is that the empirical dangers of assuming equal intervals are not great. In addition to checking on this, the dummy-variable technique can potentially lead to improvements in sociological measurement.

The recent introduction of path analysis to sociology is an event of almost revolutionary importance (Boudon 1965; Duncan 1966; Borgatta 1968, chaps. 1 and 3). In company with other advances in techniques related to multiple-regression analysis (see Coleman 1964, chaps. 4–6), we now have available procedures which are more powerful statistically, and also more directly relevant to sociological theory. Rather than leaving data analysis and theory construction as two separate steps, these techniques provide a model in terms of which the theory is expressed, and then directly evaluate the model through the statistical procedures. That path analysis can provide these models for a wide range of traditional verbal sociological theories has been shown most lucidly by Stinchcombe (1968, chap. 3 and appendix). While the potential benefits are exciting, however, there are also barriers to the realization of these benefits. My concern is with the fact that path analysis assumes that all variables have been measured in terms of an interval scale.

For some years there has been a strong tradition in sociology emphasizing the scientific purity of nonparametric statistics. It is relatively easy to poke holes in or cast doubts on any a priori rationale for assuming equal intervals, and hence it is safest to avoid this altogether. This fundamental ambiguity often seems to be resolved through custom and peer-group support. Thus there seems some tendency for path analysis to be restricted to areas such as stratification, mobility, and demography, where equal-interval assumptions are familiar (if perhaps no more certain). However, this leaves many other areas of sociology in which path analysis *could* be used by researchers who are either more courageous or more foolish. The philosophy underlying this paper is that all sciences have to work out their measurement problems as they go, either finding better ways of calibrating or gaining more confi-

[1] I would like to thank Professor George A. Miller for his cooperation in making available the data presented here, and for his assistance in carrying out the analysis.

dence in old ways. Accordingly, the proper procedure is to proceed, but proceed cautiously, which means being prepared to learn from experience.

To facilitate proceeding while learning from experience, this paper presents three approaches to the problem of interval assumptions in path analysis. First, a formal investigation discusses what can go wrong if a "true" equal-interval scale is distorted into unequal intervals. Second, the use of "dummy variables" in path analysis is elaborated, since dummy variables avoid any assumptions about intervals. Third, an empirical comparison is made of results obtained from path analysis with dummy variables, of path analysis with equal intervals assumed, and of nonparametric analysis, when these techniques are applied to one set of real data.

STATISTICAL CONSEQUENCES OF SCALING DISTORTIONS

Consider the typical situation in which one has collected data on a variable X in terms of categories. These categories are assumed to be ordered, but there is no a priori basis for an assumption that they represent equal intervals along some underlying true scale of X. If the assumed intervals (the categories) do not correspond with the true intervals, then the consequence is equivalent to bunching together intervals in some places, and spreading them out in others—an irregular transformation of the true X scale. If the true regression of Y on X is linear, then the consequence of applying this irregular transformation will be to turn a straight regression line into a zigzag of line segments. If a new regression line is fitted on the basis of the "assumed" intervals, the result would be some more or less crude approximation of the zigzag line, as in figure 1.

Since both the true regression line and the corresponding zigzag line are unknown, the real problem is to start with the assumed regression line and work backward, trying to get some idea about how crude the approximation is. A useful first step toward this goal is to consider what the zigzag line might look like. If we draw in line segments connecting the category means, we get a zigzag line which will approximate the true zigzag, and the closeness of the approximation will depend on the standard errors of the category means. That is, if the true intervals were known, and the true regression was perfectly linear, the category means would be close to the true regression line, with the expectation of "closeness" depending on their standard error. Therefore, we can approximate the true zigzag regression line by using the category means of the X variable, and we can make inferences about how good this approximation is by looking at the standard errors of the category means.

If the standard errors of the category means are small, and the zigs and zags quite pronounced, then this is intuitively reasonable evidence that the assumed equal-interval scale deviates from the hypothetical true scale. Since the zigzag line does *not* involve any assumptions about intervals, it can be used as a basis for comparison. That is, if someone proceeds boldly to assume that his categories represent equal intervals, in what ways might his results be distorted depending on the extent of zigzaginess? The situa-

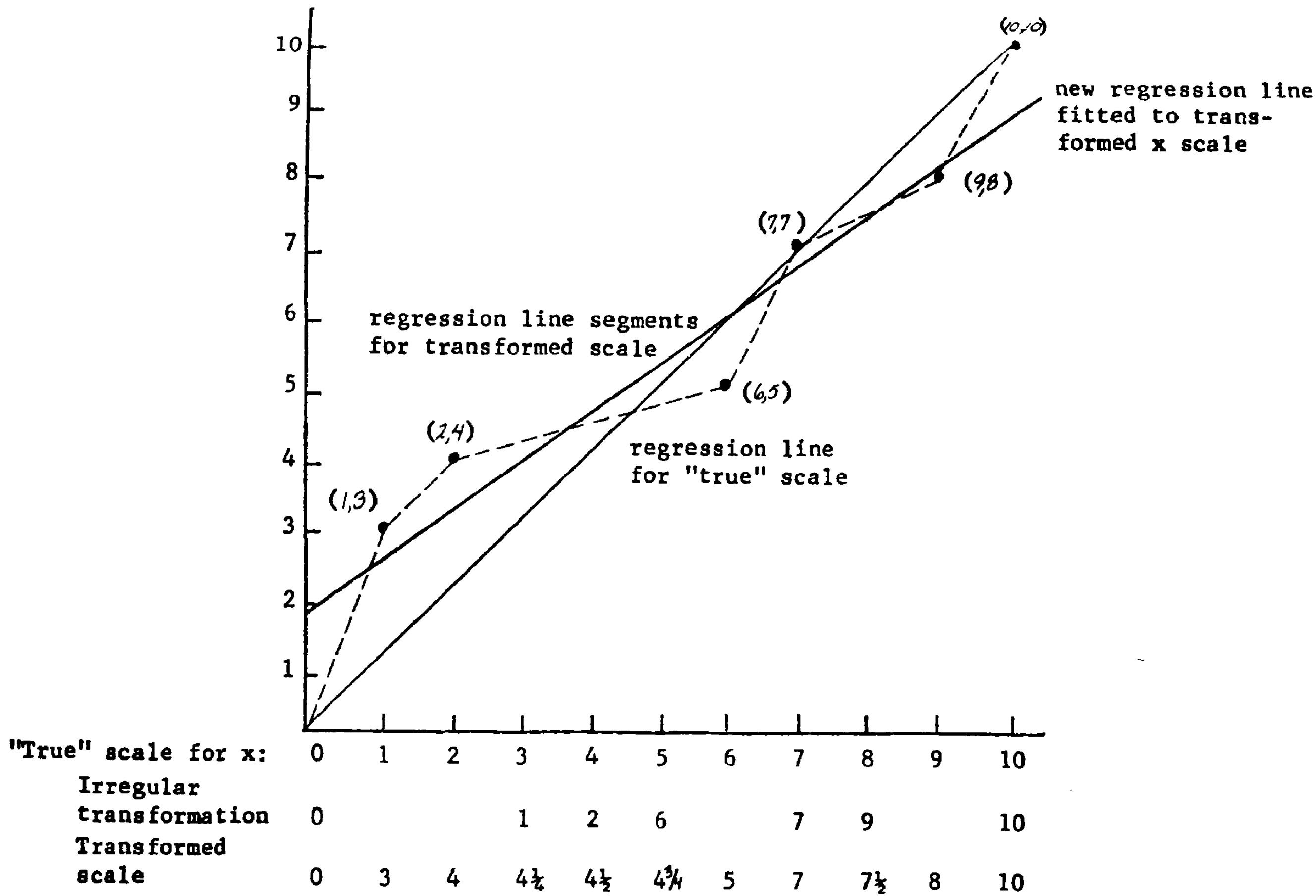


FIG. 1.—Consequence for a regression line of assuming equal intervals for an irregular transformation of the true interval scale

tion is somewhat different for correlation coefficients and regression coefficients.

The correlation coefficient is, with adjustments, a measure of how close the data fall to the regression line. This can be decomposed into variation around the category means, and variation of the category means around the regression line. A measure which is appropriate for the zigzag line is the correlation ratio, which utilizes only the first kind of variation. Since the correlation coefficient adds to this the second kind of variation, the correlation coefficient will always be smaller than the correlation ratio. Further, under the intuitive assumption that the zigzag line will almost always be a closer approximation to the true regression line, it follows that correlation coefficients computed in terms of an arbitrary equal-interval assumption will be *conservative* estimates of the true correlation. The important question, however, is under what situations will it be slightly conservative, and under what situations will it be very conservative?

The more pronounced the zigs and zags, the more variation contributed by the departure of the category means from the regression line. Therefore, the worse the assumed equal-interval scale, the more conservative the correlation coefficients. But the variation of the category means around the regression line is important only *relative to* the variation around the category means. If there is a great deal of variation around category means, proportionally the effect of the zigs and zags may not be very large. Conversely, if the data fall very close to the category means, so that the correlation ratio is close to 1.0, then only a slight amount of zigging and zagging may produce appreciable distortion. Since most sociological research works with rather low-order correlations, this suggests that the dangers of assuming equal intervals are, in addition to being conservative, not likely to be huge. Recent work by Labovitz (1967) supports this by showing that in most cases the distortion is minor.

Regression coefficients, on the other hand, measure the *slope* of the regression line. Since the regression line will try to come as close as possible to the category means, one may envisage a regression line drawn through a zigzag line in such a way as to best approximate it (see fig. 1). Since the concern is not with how close fitting this best approximation is but simply with the *slope* of the approximation, it follows that it is not the *amount* of zigzaginess which will distort the regression line but rather the *pattern* which it forms. That is, if the zigging and zagging is randomly erratic (which means that the errors made by assuming equal intervals are random distortions of the true interval scale), then the slope of the estimated regression line will not be distorted at all. In fact, distortion in the slope of the line can occur only because either (1) categories in some portion of the line are disproportionately large and the line segments connecting the means of these categories have similar slopes which are also very different from the slopes of the true regression line (more simply, if the distribution of the sample weights the zigs more than the zags); or, (2) if the zigzag line forms a special kind of pattern, such as an S-shape (as in fig. 1). In sum, the distortions in regression coefficients can be in either direction (conservative or

"radical"), but these distortions are not so likely to occur at all since they depend on a coincidence of errors rather than on the magnitude of error. Furthermore, it seems even less likely that these coincidences will produce really drastic distortions of the sort which will lead to different substantive interpretations of the analysis.

Nevertheless, distortions are still *possible*, and this is bad in two ways. First, and most simply, even rare instances of distortion are not tolerable when they can be avoided. Second, if sociology is to become a less-crude science, our tolerance limits must shrink; better measurement must be part of this progress. Both as a check on what we are doing now, and as an instrument for finding out how to do it better, attention to the calibration of interval scales is a necessity. The preceding discussion suggests some way of doing this. Rather than assume that our categories represent equal intervals, one possibility would be to recalibrate the scale so the intervals are proportional to the "effects" of each category, that is, to work backward from the zigzag line to the true scale. This approach is conventional in covariance analysis. However, if we are studying a system of several variables, so a variable may act on more than one dependent variable, we immediately run into the possibility that the effect-proportional scale implied by one dependent variable may not be the same as the one implied by another dependent variable. The difference may be due to measurement errors, or it may mean that the effects on one or both dependent variables are nonlinear, which is certainly plausible. What we need is a way of dissecting the system which avoids as long as possible *any* assumptions about interval scaling. The use of dummy variables provides one way of approximating this.

DUMMY VARIABLES AND PATH ANALYSIS

Decomposition of an ordinal variable into dummy variables is rather analogous to translating a decimal number system into binary.[2] All of the original information is retained, but the simpler vocabulary requires longer sentences. Dummy variables are dichotomous, with the categories coded "0" and "1". To decompose a trichotomous variable, which may have been coded 0, 1, and 2, we need two of these dichotomous dummy variables. In order to retain the *ordinal* property of the categories, dummy variables are constructed as shown in table 1.[3] If we know a subject's score on the two dummy variables, we know exactly his score on the original, parent variable X. Furthermore, if we are interested in the regression on X of some dependent variable Y, we could also study the *multiple* regression of this pair of dummy variables on Y.

A regression coefficient tells us the expected increase in Y for an increase of one unit in the independent variable, with other independent variables

[2] For a discussion of dummy variables see Daniel B. Suits (1957) and Richard P. Boyle (1966).

[3] Dummy variables can also be constructed so that only nominal scale information about the categories is retained, and this method is frequently employed (see Suits 1957).

controlled. For the pair of dummy variables in table 1, controlling for D_2 while looking at the effects of D_1 means that we are going to compare only subjects who are identical on D_2, that is, subjects who are 1 on D_2 (because there are no subjects who are 0 on D_2 but different, and hence comparable, on D_1). Therefore, the regression coefficient for D_1 will estimate only that increase in Y which should be expected from an increase on the parent variable X from 1 to 2. Similarly, the coefficient for D_2 will estimate only the effect of an increase in X from 0 to 1. The two dummy variables thus separate out the effects of first moving from the lower to the middle category, and then from the middle to the upper category of X. These are exactly the slopes of the two line segments in the zigzag regression line of X on Y discussed earlier.

Decomposition to dummy variables therefore allows us to estimate the slopes of the zigzag regression line. When there are several independent variables, each can be replaced by its own dummy variables, and in this way

TABLE 1

TWO ALTERNATIVE METHODS FOR DECOMPOSING A TRICHOTOMOUS PARENT VARIABLE INTO DICHOTOMOUS DUMMY VARIABLES

	Translation to Dummy Variables			
	Decomposition I		Decomposition II	
Parent Variable X	D_1	D_2	D'_1	D'_2
2	1	1	1	0
1	0	1	0	1
0	0	0	0	0

multiple-regression analysis can avoid equal-interval assumptions. Since the basic procedures of path analysis can be used with path-regression coefficients, it is also possible to replace all polytomous variables in a path system with dummy variables, and proceed in exactly the same way. While the basic procedure is straightforward, there are certain aspects of the application which introduce some new features, and these should be discussed at greater length. However, it will be useful to have a specific example available to illustrate this discussion. Applying path analysis to data originally reported by George A. Miller (1967) will provide this example.

The Miller study.—Miller's study of work alienation among scientists and engineers in a large industrial organization provides a good example of both the potential and the problems of using path analysis, for several reasons. First, the data come from a questionnaire survey of a fairly small sample ($N = 419$). Second, the fairly large system of eight variables all consist of ordered categories—three of the variables were dichotomous, five were trichotomous. Rather than assume that the categories represent an interval scale, his analysis consisted of extensive cross-tabulation, with the gamma-statistic computed for each partial table. Given the size of the sample, this

technique severely restricted how far he could go with multivariate analysis. Therefore, although his theoretical framework assumes causal relations, the analysis was not able to fully assess the causal dynamics of the system.[4]

The causal system implied by Miller's article is shown in figure 2. Scientists and engineers (X_7) with either M.A.'s or Ph.D.'s (X_8) are recruited into the company and assigned to either the aerospace group or the basic science research laboratory (X_6), divisions which differ from each other in goals and structure. It is assumed that a man's educational background can have an effect on his job assignment. Beyond these three primary variables, there are four variables (X_{2-5}) describing characteristics of the job in terms of its control-incentive structure (CIS), which are assumed to be potentially caused by the first three variables. Finally, the ultimate dependent variable is work alienation, (X_1), and it is assumed that all other variables in the system are possible causes of alienation. Path coefficients (not regression coefficients) are attached to the arrows, since this is more conventional.

Interpretation of this path system starts most naturally with the four CIS variables. The independent contribution of research choice (.336) is much greater than the effect of any other CIS variable on alienation, to an extent not anticipated by Miller's bivariate analysis. In comparison, the other three variables seem relatively unimportant for understanding the direct causes of work alienation. However, among these three, supervisory type emerges as the next most important (.147), while it was the least important in Miller's analysis. That this should happen is not surprising when the pattern of zero-order correlations in table 2 are examined. Supervisory type is less correlated with either the background variables or the other CIS variables than are these latter. The relative independence of supervisory type is also evident in the correlations between residuals in figure 2. This is a finding of some importance, since of the four CIS variables, supervisory type alone seems to refer to control, while the other three more strictly indicate incentive. Apparently, control and incentive structures are distinct not only conceptually, but also in their occurrence and in their effects.

The four CIS variables are assumed to mediate the effects of organizational unit on alienation, and in fact they do this so well that *all* of the total

[4] Miller's original hypothesis (1967, p. 757) predicted both the existence of bivariate relations and interaction effects accompanying them Specifically, he predicted that the relations would be stronger for Ph.D.'s and for scientists than for M.A.'s and engineers. While his findings generally supported the interaction hypothesis, pronounced interaction was only discovered when scientists and engineers were compared on the effects of supervisory type and company encouragement. This poses a problem, since path analysis assumes only additive effects. The justification for proceeding with an additive model here is that (1) the complications of supervisory type concerned only the difference between "participatory" and "laissez faire" supervisory types, and this distinction is removed later on when dummy variables and effect-proportional scales are used; (2) although company encouragement should be treated in terms of an interaction model, its effects here are so slight that it is unlikely to make much difference; (3) similar substantive interpretations are generated here from the additive model, and since the purpose of this analysis is illustrative only, use of an interactive path model would be an unnecessarily complicated digression.

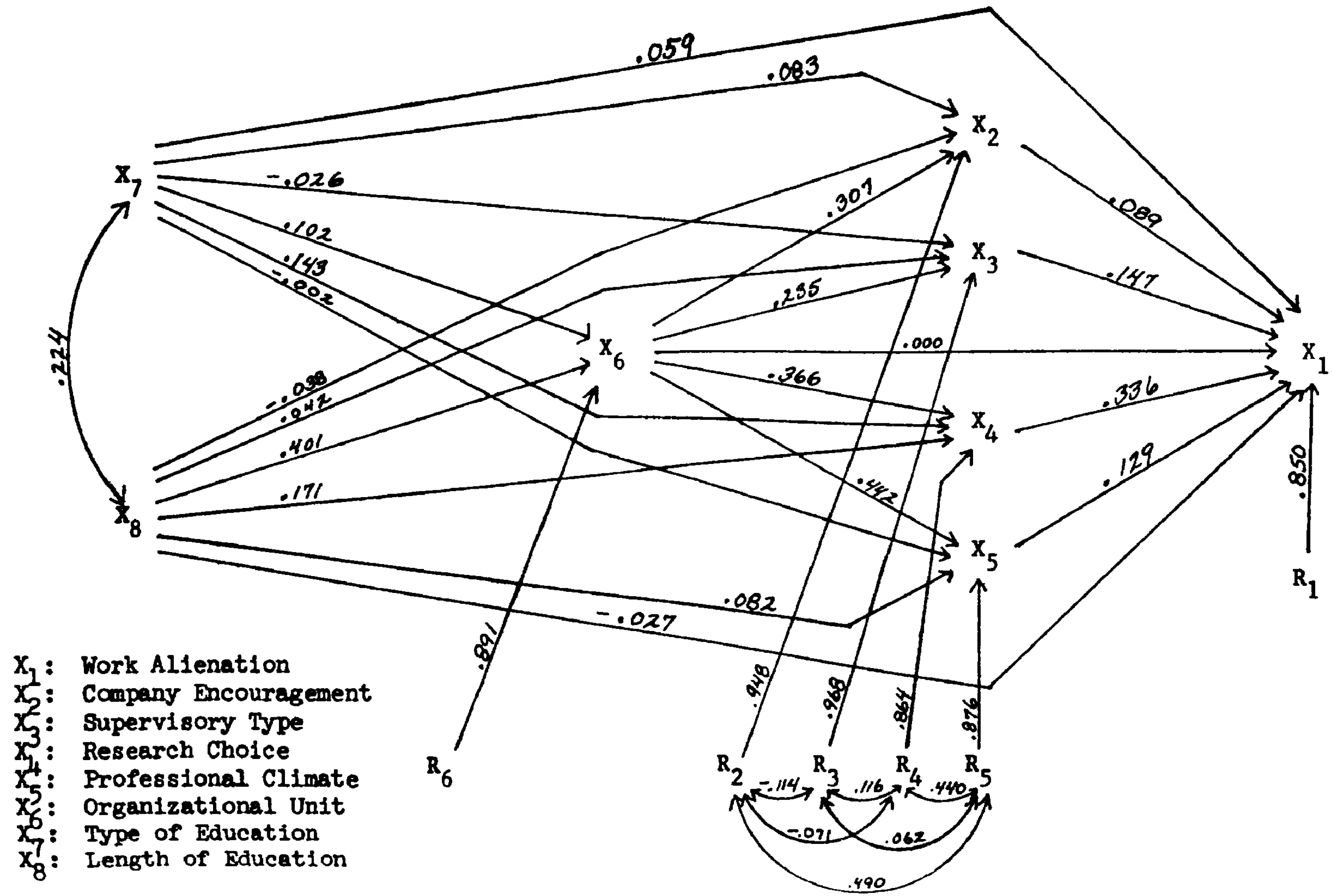


FIG 2.—Path analysis of Miller data, using path coefficients

effect of organizational unit on alienation is accounted for. Evaluation of the paths from organizational unit to alienation is shown in table 3. Half of the total effect is explained by the fact that professionals in the basic science laboratory are given more research choice; the remainder comes from the other three CIS variables, especially professional climate. Thus path analysis provides an apparently perfect explanation for the lower work alienation in the basic science laboratory.

Remaining to be interpreted are the relatively moderate total effects of the two ultimate independent variables, length and type of education. In table 3 it is evident that type of education (engineer or scientist) produces almost half (.06) of its total effect (.13) *directly*, without any mediation by the intervening variables. Of the remainder, the indirect paths show that

TABLE 2

MATRIX OF ZERO-ORDER CORRELATIONS BETWEEN VARIABLES IN MILLER STUDY

	2	3	4	5	6	7	8
1	.267	251	.477	.404	.284	.163	.170
2		.011	.290	.566	.310	.146	.114
3			.239	.184	.247	.038	.138
4				.590	.464	.226	.352
5					477	.119	.274
6						.232	.433
7							.224

NOTE.—1, work alienation; 2, company encouragement; 3, supervisory type; 4, research choice; 5, professional climate; 6, organizational unit; 7, type of education; 8, length of education.

this is accounted for by the greater propensity of scientists to be assigned to the basic science laboratory and, separately from this, to be granted greater freedom of research choice. Length of education, on the other hand, shows strong indirect paths through organizational unit (.10) and through research choice (.06). The remaining, direct, effect is slightly negative, indicating that if anything, Ph.D.'s who do not get the preferential assignment to the basic science laboratory and who are not given freedom over choice of research resent it more than do M.A.'s.

These findings support Miller's substantive conclusion that engineers, either because of recruitment or socialization, are not responsive to the same organizational variables as scientists—they continue to be more alienated from their work even when organizational variables are controlled. On the other hand, these findings also indicate that *length* of education, by itself (and Miller could not control for both simultaneously) can be satisfactorily understood in terms of the different organizational careers of M.A.'s and Ph.D.'s.

While path analysis has thus allowed us to ask questions and obtain answers which Miller could not do given his statistical technique, we now come back to the basic question of whether or not these apparently important findings can be trusted. Equal-interval scales were assumed for the five trichotomous variables, but this is a completely arbitrary assumption. Following the rationale developed earlier, the same form of path analysis will now be carried out using dummy variables to replace these trichotomies. In the process of doing this, some special features of the procedure will be explicated.

A PATH ANALYSIS WITH DUMMY VARIABLES

One unresolved problem in the literature on dummy variable-regression analysis concerns the use of dummy variables to represent a *dependent* variable (Coleman 1964, pp. 237–38; Boyle 1966, p. 848). This problem cannot

TABLE 3

PATH CONTRIBUTIONS TO THE EFFECTS OF THE PRIMARY VARIABLES, USING PATH COEFFICIENTS

Path		Effects
A. Organizational Unit		
Direct effect		.000
Paths via:		
Company encouragement	(.307) (.089) =	.027
Supervisory type	(.235) (.147) =	.035
Research choice	(.366) (.336) =	.123
Professional climate	(.442) (.129) =	.057
Total effect		.242
B. Type of Education		
Direct effect		.059
Paths via:		
Organizational unit	(.143) (.242) =	.035
Company encouragement	(.083) (.089) =	.007
Supervisory type	(−.026) (.147) =	−.004
Research choice	(.102) (.336) =	.034
Professional climate	(−.002) (.129) =	.000
Total effect		.131
C. Length of Education		
Direct effect		−.027
Paths via:		
Organizational unit	(.401) (.242) =	.097
Company encouragement	(−.038) (.089) =	−.003
Supervisory type	(.042) (.147) =	.006
Research choice	(.171) (.336) =	.057
Professional climate	(.082) (.129) =	.011
Total effect		.141

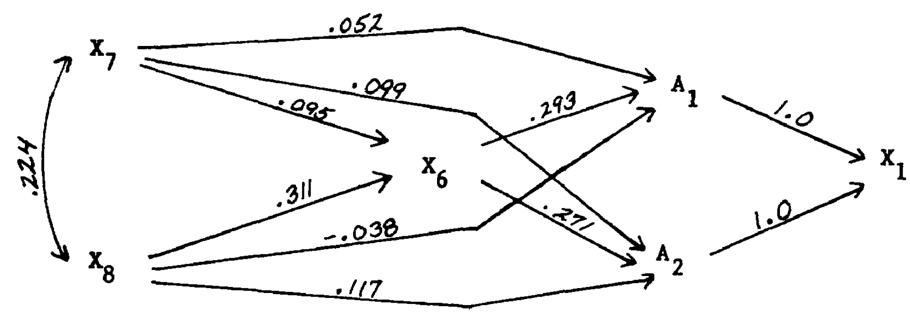
be avoided in the present case, both because work alienation is trichotomous, and because the four intervening CIS variables are trichotomous. In fact, however, a completely workable solution is very simple.

Consider the abbreviated path system for the Miller data shown in figure 3. Alienation is first represented by two dummy variables, A_1 and A_2, and these are *separate* dependent variables. Hence A_1 and A_2 merely represent two alternative ways of dichotomizing alienation, and the path-regression coefficients tell us what we would have gotten if we had chosen each cutting point. But these cutting points are also the interval steps of the parent variable, and between them A_1 and A_2 completely determine alienation. That is, an increase of one unit in A_1 means an increase of one unit in alienation. Therefore, in figure 3 the arrows from A_1 and A_2 to X_1 (alienation) are assigned coefficients of 1.0.

Carrying out the operations of path analysis means that the effects of, say, X_7 (type of education) on A_1 and A_2 are summed to get the total direct effect. But, as the last column in figure 4 shows, *this sum is exactly what we get assuming equal intervals for alienation.* Therefore, applying path-analysis operations to dependent dummy variables gives the same results as assuming equal intervals for that dependent variable, so that in one sense introducing the dummy variables is completely redundant. However, something new has been added. Comparing the effects on the two dummy variables provides an estimation of whether these effects are uniform along the categories of alienation, or whether the resistance of alienation to being effected is greater at one end of the continuum than at the other. If the latter appears to be true, then we could recalibrate the scale for alienation by assigning more intervals to the resistant portion and fewer intervals to the less-resistant portion, and with this new scale, the standardized path coefficients for the system might change. However, since there will usually be more than one variable acting on the dummy dependent variables, such a recalibration procedure will be clear only when each of these variables implies the same recalibration. This can be avoided, of course, if the operation of combining paths is not performed, and this level hence provides the best check on the original equal-intervals analysis. But the Miller data also illustrate what is involved if one tries to move beyond this.

In figure 3, the effects on A_1 and A_2 of X_6 and X_7 seem to be relatively uniform, while X_8 produces much greater effects on A_2 than on A_1. Thus, it would be reasonable to leave the alienation categories as an equal-interval scale, while noting that the effect of length of education on alienation seems curvilinear, which could be handled by using a nonlinear operator. While more complicated, this would represent scientific progress, and demonstrates one way in which the workings of the system can be made more precise. In the present case, however, the effects are quite small no matter how the analysis is done, so the extra effort does not seem worthwhile.

The situation is rather different, however, for a polytomous *intervening* variable. Here any differential effects *on* the dummy variables are multiplied by any differential effects *of* each dummy variable. In order to understand the implications of this, it will be useful to start with a consideration of



Calculation of path effects:	Paths through dummy variables: A_1	A_2	Total $(A_1 + A_2)$	Effect assuming Equal intervals
Organizational Unit (X_6)	.293	.271	.564	.564
Type of education (X_7)				
directly through A_1 and A_2	.052	.099	.151	.151
via organizational unit	.028	.026	.054	.054
total effect	.080	.125	.205	.205
Length of education (X_8)	-.038	.117	.079	.079
directly through A_1 and A_2				
via organizational unit	.091	.084	.175	.175
total effect	.053	.201	.254	.266

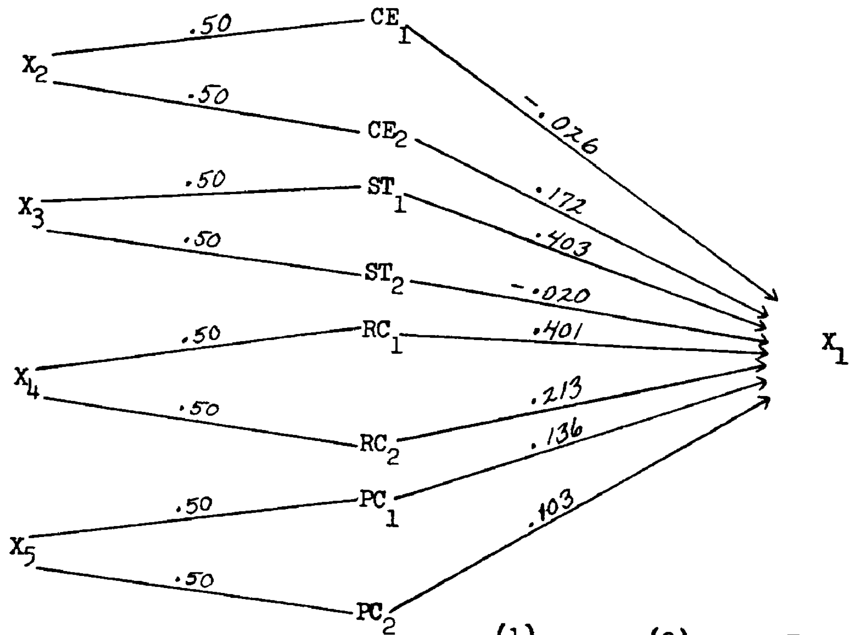
FIG. 3.—Path-regression analysis of type and length of education and organizational unit on alienation using dummy variables to represent alienation.

dummy variables simply as independent variables—for example, the effects of the four CIS variables on alienation. These are shown in figure 4 with an equal-intervals scale for alienation, and with X_6, X_7, and X_8 controlled. As before, the translation to dummy variables completely determines them, and taking account of the difference in units, the effect of each CIS variable on its dummies is .50. Then applying path operations to get the total effect of, say, research choice (RC) means, in essence, taking the arithmetic mean of the effects of RC_1 and RC_2. But since these coefficients are actually the slopes of the zigzag regression line of research choice on alienation, this averaging procedure is equivalent to *making* the zigzag line straight by altering the interval scale for company encouragement. This follows from the earlier discussion of zigzag regression lines. Thus the operation of adding together paths through dummy variables *implicitly* assumes an effect-proportional interval scale for the parent independent variable.

One consequence of this is that we will not necessarily get the same results for an independent variable when we assume equal intervals and when we use dummy variables. This is evident in figure 4, where the estimated effects of the CIS variables on alienation are compared using both methods. At the same time, while the two sets of estimates are not the same, they also do not differ very markedly, which is in line with the arguments of the first section.

However, assessing the effects of the CIS variables is only a small part of the total system. Assessing the way the CIS dummy variables mediate the effects of organizational unit and type and length of education means that indirect path effects are calculated by multiplying together the effects *on* and the effects *of* each dummy variable. In order to estimate the net effect of, say, organizational unit on alienation by way of research choice, we need to add together the paths through RC_1 and RC_2. It has already been established that summing the effects *on* a pair of dummy variables gives the same results as assuming an equal-interval scale for the parent variable. But now these dummy variables in turn have effects on a third variable, and it was also shown that summing *these* effects is the same as assuming an effect-proportional scale for the parent (intervening) variable. What actually happens when these two pieces of information are put together is shown in figure 5.

The causal relationship between organizational unit and alienation by way of research choice is shown in figure 5 in three ways, in order to demonstrate the equivalence between their logic and results. First, the paths are shown directly through the dummy variables to alienation, and the estimate of total effect is calculated according to path operations. Second, the argument that this use of dummy variables implicitly assumes an effect-proportional interval scale is demonstrated by assigning to research choice a scale (RC') which is approximately effect proportional. Since the effects of RC_1 and RC_2 (.401 and .213, respectively) are roughly in the ratio 2:1, the scale assigned to research choice was 0, 2, and 3 for its three categories. A path-regression analysis was carried out using RC', and the resulting estimate of total effect (.219) is almost the same as the first estimate (.224).



Calculation of path effects:	(1) Via DV_1	(2) Via DV_2	Total (1 + 2)	Effect assuming equal intervals
Company Encouragement (X_2)	-.013	.086	.073	.081
Supervisory Type (X_3)	.202	-.010	.192	.157
Research Choice (X_4)	.201	.106	.307	.341
Professional Climate (X_5)	.068	.052	.120	.123

FIG. 4.—Path-regression analysis of the effects of the CIS variables on alienation when represented by dummy variables

Finally, to show that these two procedures are in fact logically interchangeable, the third diagram (fig. 5) mixes the two. First, the effects of organizational unit on RC_1 and RC_2 are taken from the dummy-variable analysis. Then, the effects of RC_1 and RC_2 on RC' now correspond to the interval scores assigned to each category under RC'. Third, the effect of RC' on alienation is taken from the second diagram. This third path system therefore explicates the logic behind the first diagram, and in fact the resulting estimate (.219) differs only slightly, due to the approximate nature of the RC' scale.

In sum, using dummy variables as dependent variables does not alter the results of a path-regression analysis, although it supplies information which might lead to rescaling and hence a change in standardized path coefficients. Using dummy variables as independent variables automatically assumes interval scales which are proportional to effects, and this can

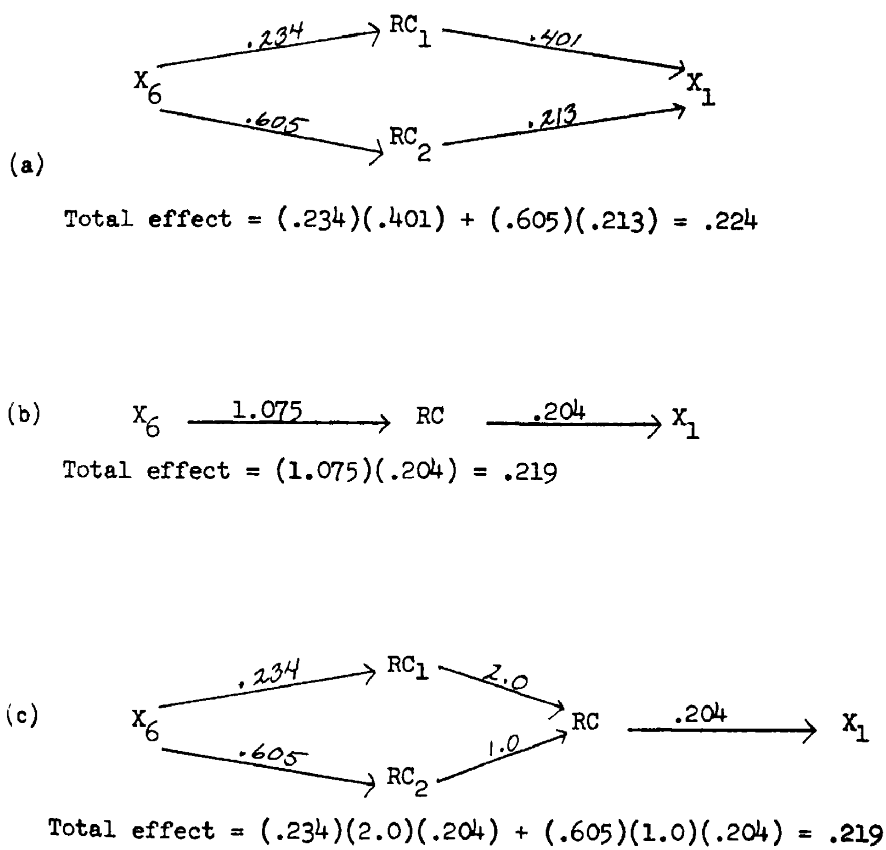


FIG. 5.—Path-regression analysis of the effect of organizational unit on alienation mediated by research choice: (*a*) replacing research choice with dummy variables, (*b*) assuming an effect-proportional interval scale, (0,2,3) for research choice (RC'), and (*c*) assuming that the dummy variables determine RC', which in turn causes X_1.

alter both kinds of coefficients. Finally, using dummy variables to represent intervening variables combines both of the above statements, and hence again has the consequence of building in interval scales which are proportional to effects. It must be remembered that this automatic assumption occurs only when paths are combined through addition—until that point there are truly no assumptions about interval scale, and this can be especially useful for a microscopic analysis of what is going on in the system. When the path operations are performed, the results are useful as a comparison with, or check on, the results obtained from assuming equal intervals. This is not to assert that effect-proportional scales are the true scale; at this point in the development of our science, it seems better to consider them as one alternative. But precisely because they are a very different alternative with a foundation quite removed from the foundation for assuming equal-intervals scales, they provide a very good test of whether or not the results of a particular analysis are sensitive to scale assumptions or relatively stable over both intervals scales. This test will now be applied to the remainder of the Miller data path analysis.

Miller data completed.—When dummy variables are used to replace the four CIS variables in the Miller data, and when alienation is retained as a trichotomy with an equal-interval scale (for reasons developed earlier), the resulting path system is shown in figure 6. Applying path operations to this system provides results which can be more easily compared with the previous, equal-interval results, and this is shown in the first two columns of table 4. In the third column, analogous results are given for an analysis in which effect-proportional interval scales were assumed for these CIS variables (that is, interval scales roughly proportional to the effects of their dummy variables on alienation). All of the results in the first three columns are based on path-regression coefficients, since that is the rationale developed for employing dummy variables.

The dummy-variable results are quite similar to the equal-interval results, which supports the earlier conclusion that assuming equal intervals will usually not introduce much distortion into a path-regression analysis. The greatest disparity concerns the direct effect of organizational unit on alienation. Where this is essentially zero under the equal-intervals assumption, with dummy variables it increases to .096. Thus the dummy-variable analysis states that the CIS variables do not do such a perfect job of accounting for the total effect of organizational unit as the earlier analysis implied. But even this is a relatively technical difference, and it seems clear that no significant differences in theoretical interpretation arise. The results for effect-proportional scales are almost exactly the same as the dummy-variable results, which of course they should be. Finally, note that the multiple correlation (R) has been slightly improved by using the effect-proportional scales (from .527 to .548), indicating a closer fit of the model to the data.

The fourth and fifth columns of table 4 compare the results for equal intervals and effect-proportional intervals when path coefficients are used. There are essentially no differences between these two columns, certainly

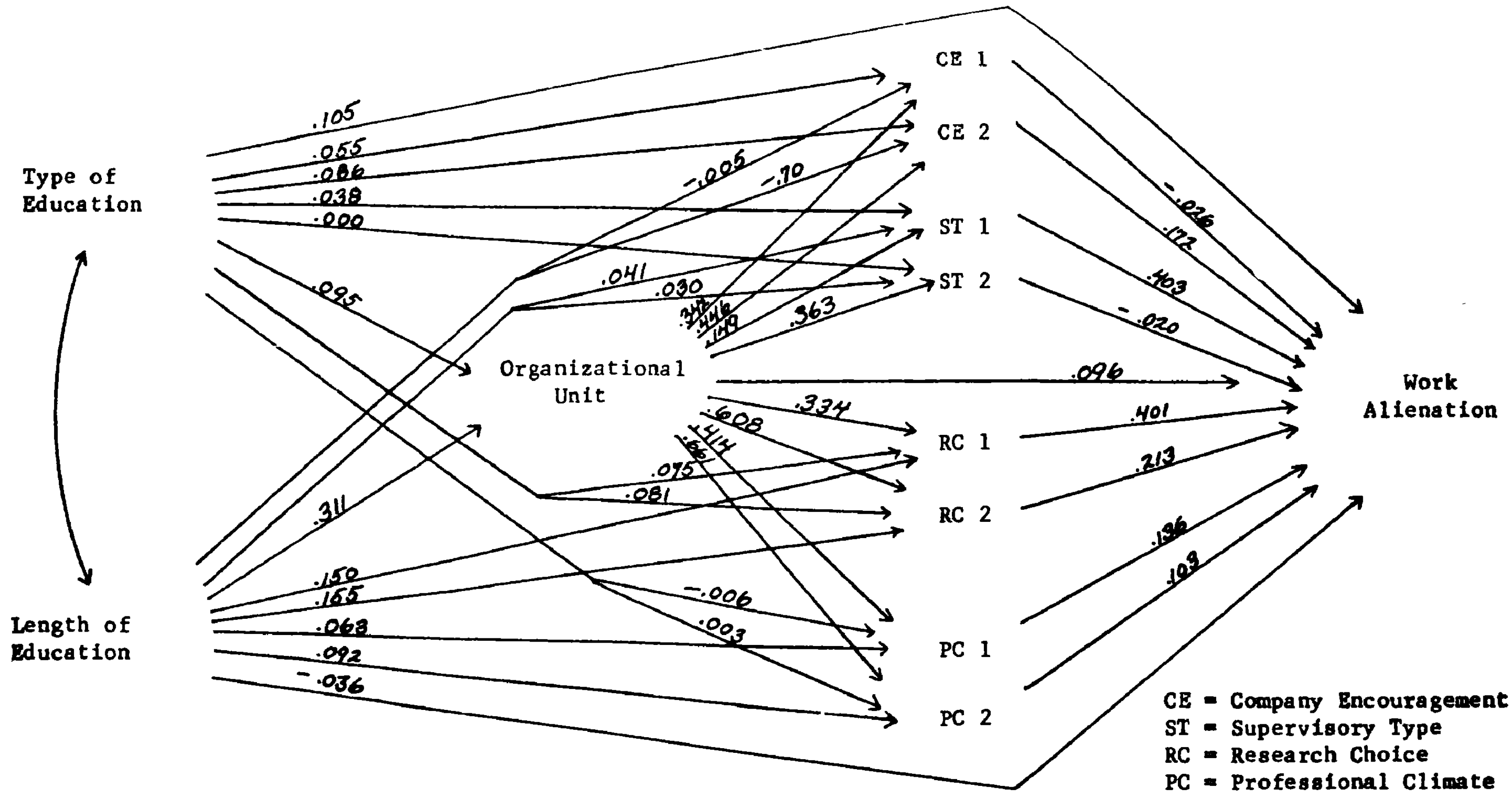


FIG. 6.—Path-regression analysis using dummy variables to replace the control-incentive structure variables (regression *b*s). For all dummy variables, *1* one contrasts the medium with the low category, *2* contrasts the high with the medium.

none which would justify calling the equal-intervals assumption dangerous or misleading. The largest difference (.04) is in the direct effect of organizational unit on alienation, which was noted during the path-regression analysis—and now the difference is even smaller. As one empirical test of the consequences for path analysis of assuming equal intervals for ordinal data, these results clearly support the contention that it will not *usually* be dangerous to assume an interval scale based on categories.

TABLE 4

PATH CONTRIBUTIONS OF THE EFFECTS OF THE PRIMARY VARIABLES FOR EQUAL-INTERVAL SCALES, DUMMY VARIABLES, AND EFFECT-PROPORTIONAL INTERVAL SCALES

	Path-Regression Coefficients			Path Coefficients	
Path	Equal-Interval Scales	Dummy Variables	Effect-Proportional Scales	Equal Interval	Effect-Proportional
		A. Organizational Unit			
Direct effect	.001	.096	.088	.000	.038
Paths via:					
Company encouragement	.064	.068	.072	.027	.031
Supervisory type	.080	.053	.059	.035	.025
Research choice	.287	.224	.219	.123	.094
Professional climate	.132	.124	.126	.057	.054
Total effect	.564	.565	.564	.242	.242
		B. Type of Education			
Direct effect	.092	.105	.105	.059	.068
Paths via:					
Organizational unit	.054	.054	.054	.035	.035
Company encouragement	.011	.014	.014	.007	.009
Supervisory type	−.006	−.015	−.015	−.004	−.010
Research choice	.053	.047	.047	.034	.030
Professional climate	.000	−.001	.000	.000	.000
Total effect	.204	.204	.205	.131	.132
		C. Length of Education			
Direct effect	−.049	−.036	−.036	−.027	−.020
Paths via:					
Organizational unit	.175	.175	.175	.097	.097
Company encouragement	.006	−.012	−.011	−.003	−.006
Supervisory type	.011	.016	.016	.006	.009
Research choice	.104	.093	.093	.057	.051
Professional climate	.019	.018	.018	.011	.010
Total effect	.266	.254	.255	.141	.141
		D. Multiple Correlation Coefficient *R* of System Predicting Alienation			
	.527	.548	.548		

CONCLUDING REMARKS

The purpose of this paper was to accelerate the diffusion of path analysis by attempting to allay the fears of many sociologists about assuming any kind of interval scale for their data. This was done first through a theoretical analysis of what *could* go wrong, and second by outlining a procedure for checking on the consequences of the interval assumptions. The theoretical analysis concluded that regression and path coefficients are generally quite stable no matter what the interval scale, because appreciable distortion depends not on the magnitude of error, but on special coincidences between more than one kind of error. The procedure for checking on whether or not such coincidences occur consists of using dummy variables in the path analysis. This introduces no new computational complexities, and requires no initial assumption about interval scales. Application of this procedure to actual data supported the contention that interval-scale assumptions are not of crucial importance in path or regression analysis.

Aside from encouraging the use of path analysis with ordinal data, the use of dummy variables constitutes an important tool for the improvement of measurement in sociology. By dissecting the complex dynamics of a system into microscopic bits, dummy-variable analysis provides a basis for calibration in terms of the internal consistency of the system. Used in this way, the potential measurement advantages go far beyond the question of whether a particular statistical technique is sufficiently robust to withstand a lot of abuse from scaling assumptions. Along the same line, dummy-variable analysis can facilitate the discovery and specification of curvilinear relations; but this raises some very general questions about where path analysis can lead sociology.

Path analysis provides a theoretical model specified as a system of simultaneous equations which are linear, additive, and, usually, recursive. The frontier opened up by path analysis is therefore the specification of sociological theory as systems of more complicated simultaneous equations. Any sociological thinking, whether or not it is labeled "theory," which conceptualizes phenomena in terms of "variables" and relations between variables, can be and in fact *ought to be* directed toward this kind of expression. The difficulties lie not so much in the mathematics as in the muddiness of most sociological thinking. Clear thinking is not necessarily correct thinking—in fact it runs a better chance of being shown false. Path analysis is an important step in an important direction precisely because it forces systematic and explicit theoretical work. This paper will have justified itself if henceforth it becomes less easy for sociologists to use "ordinal data" as an excuse for theoretical laziness.

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Social Mobility and Membership in Voluntary Associations[1]

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Two alternative hypotheses regarding the consequences of vertical social mobility for membership in voluntary associations are investigated. The socialization hypothesis predicts an adaptive outcome, while the dissociation hypothesis holds that maladaptive responses to mobility obtain. Mean numbers of memberships in voluntary associations are tabulated for respondents cross-classified according to social status of origin and of destination, which reflects social mobility status. The observed means are plotted against hypothetical means obtained from a statistical model of additive effects, and differences are inspected for convergence with or significant departures from the means predicted by the model. The data do not support the dissociation hypothesis, which leads to the conclusion that vertical social mobility exerts little or no effect on affiliations with voluntary associations. The status effects of social origins and destinations account for variations in number of memberships at significant levels, which supports the notion that socialization processes operate during the course of social mobility to mediate responses at expected levels.

This study of the effect of social status origins and destinations on membership in voluntary associations joins a score of research efforts concerned with the consequences of vertical social mobility. These studies, in most cases, have focused on the disruptive or pathological effects of social mobility, a conception referred to here as the "dissociation hypothesis." Vertical movement through social space is seen as a precipitant of social isolation, separating individuals from nonmobile peers who remain in their status of origin, as well as from peers in their status of destination. The social distance resulting from vertical mobility effectively reduces the integrative effects of shared norms, values, beliefs, and presses for conformity. Social mobility in this view is a disruptive experience, generating anxiety, alienation, insecurity, and other forms of maladaptive behavior. This orientation to social mobility has given rise to studies seeking to establish links between mobility and various personality or social pathologies, such as mental illness, suicide, prejudice, and alienation. (See Sorokin 1959, pp. 508–28. Others who have discussed dissociation effects include Blau 1956, 1957; Bettelheim and Janowitz 1964; Janowitz 1956; Ruesch 1953; Stuckert 1963; Wilensky and Edwards 1959; Miller 1960; Srole et al. 1962; Greenblum and Pearlin 1953;

[1] I wish to express appreciation to Edward O. Laumann, Eugene Litwak, and Henry J. Meyer for the data made available for this research. I am grateful to David Street and Edward O. Laumann for their helpful comments and suggestions for the revisions of earlier drafts.

Silverstein and Seeman 1959; Hodge and Treiman 1966; Ellis and Lane 1967. Hollingshead, Ellis, and Kirby 1954 were concerned with social mobility and mental illness. See Lystad 1957; Ellis 1957; Srole et al. 1962. Breed 1963 studied suicide. Greenblum and Pearlin 1953 sought mobility correlates in prejudice. See Silverstein and Seeman 1959; Bettelheim and Janowitz 1964; Hodge and Treiman 1966. Correlates of the alienation concept are represented in Stuckert 1963; Litwak 1960*a*, 1960*b*; LeMasters 1954; Curtis 1958, pp. 88–90; Yellin 1955.)

More recently, the consequences of social mobility have been conceptualized as the outcome of successive events associated with the move between social class status of origin and status of destination, what we will call the socialization hypothesis (Blau 1956 called this concept the acculturation hypothesis). This point of view draws on theories about reference group, anticipatory socialization, and continuous adult socialization. (Merton and Kitt 1953 applied the concept of anticipatory socialization to social mobility. See Wilensky 1966; Blau 1956; Ellis and Lane 1967; Srole et al. 1962; Hodge and Treiman 1966. Adult socialization is discussed by Bloom 1964, pp. 193–96; Newcomb 1943, pp. 58–59; Yarrow and Yarrow 1964; Henry 1965, pp. 30–47.) In the socialization hypothesis, the current behavior of the mobile individual is seen as the outcome of both antecedent and current psychosocial forces impinging on it. The behavior and attitudes represented among peers in the status of destination may constitute a model for effecting behavioral modifications. The degree to which a mobile individual changes his attitudes may vary from one case to another. The adaptation process may be accelerated by an individual's own motivation and the availability in his current status of highly visible cues and reinforcements. For another, the process may be impeded by conflicting loyalties to artifacts of his origin status, insufficient individual motivation, or low visibility in his current status of behavioral cues and reinforcements. From the vantage of the individual, several adaptive patterns of response to vertical mobility may exist. Patterns of adaptation may be influenced by the rapidity of the mobility, the expenditure of psychic and social energy entailed, the availability of social and economic resources, the strength of behavioral cues and reinforcements to which the mobile individual is exposed, or the richness of the social environment.

The study of social mobility in the aggregate entailed in this research necessarily conceals individual modes of adaptation. Our basic interest here is in the dynamics which operate on the whole to produce a particular behavioral outcome for socially mobile individuals. We wish to determine whether there is sufficient evidence present in a behavioral outcome as assessed against status variables to make inferences about antecedent processes which influenced it. Such evidence is obtained through an investigation of the socialization and dissociation hypotheses. Membership in voluntary associations provides a behavioral medium which facilitates the investigation of origin and destination effects and, inferentially, those antecedents effecting a behavioral outcome. Membership is particularly useful in this analysis, since membership has been investigated extensively for

the effect on it of social status per se (Axelrod 1956; Wright and Hyman 1958; Warner 1949; Erbe 1964). Research findings from such studies provide base-line knowledge about status effects, making it possible to extrapolate effects according to the dimensions of the hypotheses used in this study. Membership in voluntary associations represents a known quantity in my investigation, providing greater confidence in the identification of conformity to departures from expected behavior.

The socialization hypothesis holds that changes in behavior are incremental over an extended period of time. (For findings supporting the socialization hypothesis, see Hodge and Treiman 1966; Roth and Peck 1951; Berent 1952; Blau and Duncan 1967, pp. 361–400.) Blau (1956, p. 291) postulated that an ex post facto assessment of current behavior of mobile individuals would reflect an intermediate level of conformity when contrasted with the behavior of nonmobile, since the socially mobile individual has been subject to the psychosocial forces of both reference groups. A variation of this dynamic may occur when the mobile person is located socially and economically in his destination status but has not yet acquired all of the behavioral and attitudinal accoutrements typical of that status. He may be in an intermediate stage of the process of adjusting his behavior so that it is consistent with the normative influences of his destination status. An aggregate of mobile persons occupying a given destination status may thus represent a range of phases of adaptation. One might suspect that the intermediate level of conformity discussed by Blau may be simply a statistical artifact where the aggregate is composed of an array of persons representing several levels of conformity.

The major drawback of research assessing consequences of social mobility has been the narrow focus on the effect of vertical movement alone or, occasionally, on the combined effects of mobility and current social class status. Research has seldom considered the joint effects of both the origin and destination of social class statuses. Reasons for this may include the fact that longitudinal recall data are difficult to obtain and are replete with problems of validity and reliability. An aspect of this problem is the system used to classify mobility status. Usually, respondents are classified according to the degree of upward and downward mobility. The subgroupings derived from this classification are then compared on the dependent variable. If a mobile group departs markedly from the nonmobile group on the dependent variable, the effect is attributed to vertical mobility, without acknowledging the independent effects of the origin and destination status variables used operationally to define mobility status.

In the absence of longitudinal data, the model of additive effects provides a preferred alternative. This assumes that the effect of any one origin status is the same for all destination statuses flowing from that origin. The effect of a common destination status is the same for all origins composing it. The expected outcome of a given behavior for any combination of origin and destination statuses is a weighted average of the effects of the two status variables on that behavior. Persons low on the origin status variable but high on the destination variable would appear, on the average, to be located

somewhere between the origin and destination norms for that behavior in their performance of it. The model of additive effects provides a calculated estimate of the outcome predicted in the socialization hypothesis, against which the observed empirical behavior can be assessed.

The conditions of the socialization hypothesis are met if the socially mobile person alters the number of his affiliations with voluntary associations so that it is about the same as that of his nonmobile peers but intermediate between the norms of his statuses of origin and destination. For example, the upwardly mobile person would be expected to belong to more organizations than the downwardly mobile person. As the upwardly mobile individual responds to the psychosocial influences of his destination status, he is likely to discover that participation in voluntary associations is an accoutrement of his higher status. He initiates efforts which result in an increase in his affiliations. Commenting on this phenomenon, Whyte (1957, p. 317) writes of the mobile suburbanite: "Before long Charlie Adams may feel the urge to shoot out a few extra roots here and there and, having normal joining instincts, may think a mild involvement in some community-wide organization just the thing. When the matter is bruited to him he may be tentative—nothing strenuous, understand, awfully busy with company work; just want to help out a little. Instantaneously, or no longer than it takes one person to telephone another, the news is abroad Charlie will never be quite the same again. He has plunged into a hotbed of participation." In addition to the strong expectation that one should participate, the upwardly mobile person acquires the means of participation. He now has the necessary occupational and social status, as well as an economic means to cover the expense of participation. His employer may be more flexible in allowing time off work to participate in community affairs; it may even be a part of his job to help convey the image of the civic-minded corporation.

The downwardly mobile person may also respond in a manner fitting the socialization hypothesis. If he is sensitive to social pressures, he may spend more time associating informally in neighborhood and friendship groups rather than in membership associations. He is not likely to be exposed to the profusion of voluntary associations making appeals to the attention and energy of the middle-class individual. Opportunities for him to affiliate are thus decreased. As he acclimates to the prevailing activity patterns, he may concentrate his social affiliations in church and labor-based organizations, which typically are patronized by lower-class individuals for social outlets. His limited financial resources may impose further restrictions on his activities in voluntary associations. The resulting outcome is a reduced number of memberships in voluntary associations. His response is adaptive because it is compatible with the behavior of his nonmobile peers.

The dissociation hypothesis asserts that the incongruity and conflicting demands of inconsistent origin and destination statuses generate intrapersonal insecurity and frustration. The tension felt by the socially mobile person affects his performance in other sectors of his life, producing departures from behavior usually expected of occupants of his destination

status. For example, the socially mobile person who is insecure in his new status may respond by belonging to more organizations than most of his nonmobile peers. His overconformity may be seen as a way of dealing with his feelings of frustration or as an effort to obtain the acceptance of his peers. In a contrasting mode of adaptation, the socially mobile person who is alienated from the social influences of both his origin and destination statuses may underconform, that is, belong to fewer voluntary associations than his nonmobile peers. A finding of over- or underconformity would confirm the dissociation hypothesis with respect to membership in voluntary associations, providing that statistical interaction is significant.

The investigation of social mobility and participation in voluntary associations has not produced findings which clearly support either the dissociation or the socialization hypothesis. Curtis (1958, pp. 150–51) found no differences between mobile and nonmobile respondents in his study, although there was evidence that downward mobility was associated with a decrease in the number of memberships in associations. Sykes (1954, pp. 86–94) found that upward mobility may increase the number of memberships in associations, while a decrement in memberships may result from downward mobility, which is consistent with the socialization hypothesis. Findings regarding mobility and membership in trade unions are instructive. As the socialization position would predict, downwardly mobile persons more frequently belonged to trade unions, which are occupation-oriented organizations and thus strongly associated with social class status. The number of upwardly mobile persons in trade unions was negligible (Lipset and Gordon 1953). Downwardly mobile persons stood a stronger chance of affiliating with a trade union because their survival in the occupational world demanded it. Upwardly mobile individuals were not exposed to the same opportunity in the managerial and professional occupations, where unionism had not made inroads at the time of this research. Affiliation with unions is thus positively associated with the probability of exposure to the pressure to join. The mixed findings to date in the mobility and affiliation research may be due in part to the neglect of the direct effects of origin and destination statuses, which are critical in the study of the consequences of social mobility.

DATA AND METHOD

The mechanics of this analysis provide for the computation of the mean number of memberships in voluntary associations which could result hypothetically from the independent effects of status of origin and status of destination. These hypothetical means are then subtracted from those obtained from the empirical data to facilitate an examination for inconsistencies or departures. A high degree of congruity between the hypothetical and observed means supports the socialization hypothesis. A significant departure supports the dissociation hypothesis.

Data regarding voluntary association membership, from two survey samples, were analyzed for the purpose of testing the socialization and dis-

sociation hypotheses. The use of the two sources of data was undertaken in order to determine whether the finding obtained in one population would be replicated in the other. The first study provided data obtained from white males in the contiguous communities of Cambridge and Belmont, Massachusetts.[2] This sample was obtained by the use of area probability sampling procedures. The second study provided data from white mothers of elementary school youngsters in Detroit, Michigan.[3] The youngsters in this latter study were sampled from the population of ten- to twelve-year-old pupils in eighteen Detroit public schools, selected systematically to satisfy the interests of the primary researcher. Because school units in this sample were not sampled probabilistically, the basic assumptions required for inferential analysis were violated. However, the findings of several statistical tests satisfied me that demographic characteristics of the sample did not depart markedly from those of the general population of Detroit (Vorwaller 1967, pp. 293–301). The results of the analysis were not modified significantly when school area effects were held constant, which provided additional confidence that sampling procedures had not produced sample characteristics different from those of the population.

Social class status of the respondents and respondents' fathers were obtained by collapsing occupational status categories as shown in the table below. Occupational status is considered to be an extremely condensed measure of social class status (see Chinoy 1955, p. 181; Kahl 1961, p. 53; Duncan and Hodge 1963). Occupational prestige ratings have shown re-

Social Class Status	Occupational Status
Higher white collar....	Professional, technical, and kindred workers, managers, officials, and proprietors
Lower white collar....	Sales workers, clerical, and kindred workers
Higher manual.......	Craftsmen, foremen, and kindred workers
Lower manual........	Operatives and kindred workers, service workers, laborers
Not classified.........	Not in experienced civilian labor force, not reported, information not available

[2] Data were made available for this study by Edward O. Laumann, University of Michigan. The sample was drawn from the contiguous Massachusetts communities of Cambridge and Belmont (subsequently to be referred to as Cambridge data). Both communities are heavily urbanized areas, well integrated socially and economically into the Boston metropolitan area. Although the extreme categories of the occupational scale were overrepresented in the sample to provide numbers of adequate magnitude for the analysis of occupational social distance, an analysis disclosed that the occupational distribution obtained in the sample coincided very closely with that reflected in the 1960 Census. See Vorwaller (1967, pp. 302–310).

[3] Data from this study were made available by Professors Eugene Litwak and Henry J. Meyer, University of Michigan. The research investigated relationships between bureaucracies and primary groups. It was supported in part as Project no. 5-0355, Office of Education, U.S. Department of Health, Education, and Welfare.

markable stability over time and space, as seen in Hodge, Siegel, and Rossi (1964). Female respondents were classified according to the occupational status of the main breadwinner in the family to locate them in a social stratification hierarchy. Intergenerational vertical mobility was determined by contrasting status of origin (father's status when the respondent was about sixteen years old) and status of destination (status of the respondent or the main breadwinner at the time of the interview). Discrepancies between the two statuses indicated vertical mobility.

The multiple classification analysis used in this study is a modification of regression analysis, similarly providing means, sums of squares, η coefficients, and an adjusted multiple correlation coefficient. The analysis requires one dependent variable, regarded as quantitative (that is, measured on an interval scale), and two or more independent variables, each regarded as qualitative or classificatory. The dummy variable procedure was used in the treatment of the independent variables. Each category of each independent variable in this procedure is assigned to value of one or zero according to whether a case in the sample corresponds to a given category of the variable (Suits 1957). The multiple classification technique assumes that members of a particular category of an independent variable possess an attribute which exerts a distinct influence on the dependent variable.

Additive effects are represented statistically as $\bar{Y}_{ij} = \bar{Y} + a_i + b_j + e_{ij}$, where $\bar{Y}_{ij}$ is the mean score for the cell category; $\bar{Y}$ is the grand mean for the total sample; a_i is the effect of belonging to the ith origin class and is expressed as a deviation from the grand mean; b_j is the effect of belonging to the jth destination status, also expressed as a deviation from the grand mean; and e_{ij} is the difference between the observed and the calculated mean, computed on the basis of the additive effects of row and column categories. The model of additive effects assumes that row and column net effects are constant for all cross-classifications subject to the effects of the row and column categories. The net effects of row and column categories provide a basis for calculating the hypothetical means of each of the cross classifications of the row and column variables ($\hat{Y}_{ij}$) which would obtain if all variation in a given dependent variable were due to the additive effects of social class statuses of origin and destination. The difference between the observed and hypothetical means ($\bar{Y}_{ij} - \hat{Y}_{ij}$) provides a baseline for assessing the goodness of fit of the observed data to a model of additive effects. For a technical discussion of the multiple classification analysis, the interested reader is advised to consult the authors of this technique (Blau and Duncan 1967, pp. 115–62, 371–400; Duncan 1966; Hill 1959; Brownlee 1960; Morgan et al. 1962, pp. 508–11).

The mobility status of the respondents in the sample is represented in the cross-classification of social class statuses of origin and destination (tables 1, 2). The diagonal categories represent the nonmobile; the upwardly mobile are located in those cells to the left of the diagonal, and the downwardly mobile are in the cells to the right of the diagonal.

MOBILITY AND PARTICIPATION

The mean number of memberships in voluntary associations for the two samples for all categories of vertical mobility is presented in the second panel of table 1 (Cambridge males) and table 2 (Detroit mothers).[4] In both samples social class statuses of origin and destination appeared to be relatively unimportant in accounting for variance in the number of associations to which a person may belong. Only 8.4 percent (adjusted R coefficient = .29) of the variance was due to the joint effects of social class statuses of origin and destination in the Cambridge data. The two statuses were more important in accounting for variance among the Detroit mothers, however, where they were jointly responsible for 16 percent of the variance (adjusted R coefficient = .40). Despite the relative weakness of social class statuses of origin and destination in accounting for variance, there is still justification for testing our alternate hypotheses, since within the statuses of origin and destination, the patterning of memberships in voluntary associations was statistically significant at probability levels exceeding .01.

The data in panel 2 of tables 1 and 2 indicate that substantial differences in mean memberships in voluntary associations obtain for the various status subgroups. Examination of the row totals shows that as status of destination increases, membership in associations also increases. This pattern also obtains in the column totals, where the number of voluntary associations to which one belongs increases directly as status of origin increases. This pattern replicates the finding obtained in studies of affiliation with voluntary associations and social class status. The monotonic pattern of increasing memberships and social class status also obtains for the nonmobile categories, seen in the entries along the main diagonal. Looking at the mobile subgroupings to the left and right of the diagonal in both tables, it appears evident that origin and destination statuses indeed exert additive effects on memberships as postulated in the socialization hypothesis. For each change upward or downward in destination status, there tends to be a change in the same direction in the mean number of memberships for a given mobility subgrouping. The same holds true for changes in origin status. The patterning obtained is not strictly monotonic, due primarily to the small numbers of cases in some of the cross-classifications of the mobile. In order to confirm the impression obtained by inspection of an additive-effects pattern, and also to test the dissociation hypothesis, the additive model is fitted to the data. The hypothetical means obtained from

[4] The reader may be interested in the difference in mean number of memberships in voluntary associations between the two samples, since the difference departs from that expected from other findings. Whereas Bell, Hill, and Wright (1961, pp. 43ff.) found that men are more likely to be members of voluntary associations than are women, the data analyzed here indicate the opposite. The average Detroit mother belonged to slightly more associations (grand mean = 1.62) than the average Cambridge male (grand mean = 1.14 associations). The difference is probably due to variations in the data collection instruments. The Detroit mothers were given a check list of organizations to facilitate recall, while the Cambridge males were asked to list their affiliations from memory. The check list apparently was more efficient both in defining what was to be considered a voluntary association and in calling to mind actual memberships.

TABLE 1

Mean Number of Memberships in Voluntary Associations according to Social Class Statuses of Origin and Destination (Cambridge Male Sample)

Social Class Status of Origin	Total	Social Class Status of Destination: White Collar: Higher	White Collar: Lower	Manual: Higher	Manual: Lower	Not Classified
1. Number						
Higher white collar...	110	90	7	9	3	1
Lower white collar...	50	20	13	8	9	...
Higher manual...	88	20	14	24	30	...
Lower manual...	155	26	27	27	75	...
Not classified...	14	4	1	2	7	...
Total...	417	160	62	70	124	1
2. Observed Mean Memberships						
Higher white collar...	1.60	1.84	0.43*	0.78*	0.00*	0.00*
Lower white collar...	1.12	1.60	1.23*	0.38*	0.55*	...
Higher manual...	0.88	1.35	0.86*	0.67	0.73	...
Lower manual	0.96	1.54	1.00	1.07	0.71	...
Not classified...	1.29	2.00*	0.00*	1.00*	1.14*	...
Total.....	1.14	1.71	0.94	0.81	0.71	0.00
3. Calculated Mean Memberships						
Higher white collar....	...	1.76	1.04*	0.92*	0.80*	0.00*
Lower white collar	...	1.62	0.90*	0.78*	0.66*	...
Higher manual...	...	1.55	0.83*	0.71	0.59	...
Lower manual...	...	1.70	0.98	0.86	0.74	...
Not classified.....	...	1.94*	1.22*	1.10*	0.98*	...
4. Observed Minus Calculated Means						
Higher white collar...	...	0.08	−0.61*	−0.14*	−0.80*	0.00*
Lower white collar...	...	−0.02	0.33*	−0.40*	−0.11*	...
Higher manual.......	...	−0.20	0.03*	−0.04	0.14	...
Lower manual......	...	−0.16	0.02	0.21	−0.03	..
Not classified.....	...	0.06*	−1.22*	−0.10*	0.16*	..

Note.—Increment for destination: $F = 5.27$, $P < .01$. Increment for interaction: $F = .78$ (N.S.). Gross effects of origin: $F = 3.76$, $P < .01$. Gross effects of destination: $F = 9.81$, $P < .01$. Adjusted R coefficient = .29.

* Number of cases less than twenty.

MEAN NUMBER OF MEMBERSHIPS IN VOLUNTARY ASSOCIATIONS ACCORDING TO SOCIAL CLASS STATUSES OF ORIGIN AND DESTINATION (DETROIT FEMALE SAMPLE)

Social Class Status of Origin	Total	Social Class Status of Destination				
		White Collar		Manual		Not Classified
		Higher	Lower	Higher	Lower	
1. Number						
Higher white collar...	118	38	14	27	39	...
Lower white collar...	49	17	5	11	16	..
Higher manual......	200	39	31	56	72	2
Lower manual.......	315	47	24	76	166	2
Farm.............	125	15	10	23	75	2
Not classified.......	37	4	...	9	22	2
Total............	844	160	84	202	390	8
2. Observed Mean Memberships						
Higher white collar...	2.50	3.16	2.71*	2.56	1.74	..
Lower white collar...	2.22	3.12*	3.20*	2.18*	1.00*	.
Higher manual......	1.98	2.79	2.16	2.09	1.44	0.00*
Lower manual.......	1.31	1.87	1.96	1.34	1.07	0.00*
Farm...............	0.99	2.00*	1.00*	1.22	0.73	0.50*
Not classified......	0.81	3.50*	...	0.77*	0.41	0.00*
Total............	1.62	2.59	2.12	1.72	1.10	0.13*
3. Calculated Mean Memberships						
Higher white collar...	...	3.13	2.69*	2.38	1.88	...
Lower white collar...	..	2.84*	2.40*	2.09*	1.59*	...
Higher manual......	...	2.73	2.29	1.98	1.48	0.24*
Lower manual.......	...	2.20	1.76	1.45	0.95	0.14*
Farm...............	..	1.95*	1.51*	1.20	0.70	−0.11*
Not classified.......	...	1.84*	...	1.09*	0.59*	0.22*
4. Observed Minus Calculated Means						
Higher white collar...	...	0.03	0.02*	0.18	−0.14	...
Lower white collar...	...	0.28*	0.80*	0.09*	−0.59*	...
Higher manual......	..	0.04	−0.13	0.11	−0.04	−0.24*
Lower manual......	...	−0.33	0.20	−0.11	0.12	−0.14*
Farm...............	..	0.05*	−0.51*	0.02	0.03	0.61*
Not classified.......	...	1.66*	...	−0.31*	−0.18*	−0.22*

NOTE.—Increment for destination: $F = 10.20$, $P < .01$. Increment for interaction: $F = 2.76$, $P < .01$. Gross effect of origin: $F = 17.00$, $P < .01$. Gross effect of destination: $F = 27.00$, $P < .01$. Adjusted R coefficient = .40.

* Number of cases less than twenty.

the sum of the grand mean and the net effects of origin and of destination statuses are arrayed in panel 3. The fourth panel presents the differences between the empirical and the hypothetical means.

If the dissociation hypothesis were to obtain, we would expect the additive model in panel 3 either to overstate significantly or to understate significantly the mean memberships for the mobility categories, depending on the particular dynamics producing interaction effects. If the overstatement or understatement of means occurs as predicted in the dissociation hypothesis, we would expect to find a patterning of difference scores in panel 4a in the cells off the diagonal to the left or right, representing a marked departure of the observed data from the additive model. It is evident from an examination of the difference scores in panel 4 that the departures of the observed data from the additive model are generally small. Note in the Cambridge data a clustering of negative differences in the left-hand column, representing a slight understatement of mean memberships for the upwardly mobile. In this case, however, it is fruitless to conjecture regarding the meaning of this understatement, since statistical interaction is not significant.

The case of the Detroit mothers is somewhat different, since interaction effects are significant at a confidence level exceeding .01. The clustering of negative differences obtained for the extreme downwardly mobile cases, located in the upper right-hand column, is suggestive of the understatement pattern predicted by the dissociation hypothesis. In this case, the differences are hardly large enough to be convincing, even though the direction of the difference is interesting. In both the Cambridge and the Detroit data, the larger differences are conspicuously located in cells with very small case bases, where the possibility of random fluctuation is greatest. Except for the two clusterings of negative differences, it appears that the positive and negative differences are not systematic, providing further evidence against the dissociation hypothesis. Even though the interaction effect in the Detroit data is significant, there is no compelling evidence that it is due to conditions specified in the dissociation hypothesis. There is no clear patterning indicative of a dissociation effect on the basis either of magnitude of difference or of direction of departure.

The departure of the observed from the calculated means is summarized in table 3 according to gross mobility categories. A reduction of data into these categories provides a basis for determining the most general nature of the discrepancy between the observed and calculated means. The weighted average departure for each of the mobility categories represented in the difference score in the third column and summarized in the ratio of the observed to the calculated means in the fourth column indicates whether the respondents in the mobility categories belonged to more or fewer associations than hypothetically expected from the additive model. With this highly condensed data, the pattern of mean number of memberships is reproduced by the additive model with a high degree of integrity. This permits the conclusion that although there are differences in the number of associations to which the socially mobile belong, they accrue essentially

'om effects of origin and destination statuses, and not from social mobility er se. Although, in the aggregate, the upwardly and downwardly mobile ı both samples belonged to slightly fewer associations than hypothetically ılculated according to the additive model, the observed mean member- ıips of the mobile were actually greater than the means obtained for the onmobile. For each line in table 3 t-tests were computed to test the sta- stical significance of the departure of the observed means from those ‹pected hypothetically from the multiple classification analysis. With only

TABLE 3

SUMMARY OF OBSERVED AND CALCULATED MEAN NUMBER OF MEMBERSHIPS ACCORDING TO MOBILITY STATUS

Mobility Status	Observed Means (a)	Calculated Mean (b)	Difference (a−b)	Ratio (a/b)	No. of Cases
			Detroit Females		
pward..........	1.99	2.06	−0.07	0.97	234
onmobile	1.63	1.51	0.12	1 08	265
ownward........	1.78	1.84	−0.06	0.97	179
			Cambridge Males		
pward..........	1.25	1 26	−0.01	0.99	134
onmobile........	1.24	1.20	0.04	1.03	202
ownward........	0.60	0.82	−0.22	0.73	66

NOTE.—Not Classified and Farm categories are excluded from these calculations.

ıe exception, the t-ratios are less than unity. The observed mean does not any case depart significantly from the calculated mean at the .10 level r a two-tailed test (Treiman 1966, p. 659).[5] With the exception of the ›wnwardly mobile category in the Cambridge sample, the ratios of the ob- rved to the calculated means are extremely close to unity, indicating the iciency with which the additive model reproduces the empirical data. ;ain, this finding supports the conclusion that social mobility per se does t precipitate significant departures in levels of membership in voluntary sociations. Among both the mobile and nonmobile populations status ects appear to be the moving force which affects affiliation in voluntary sociations.

he means expected from the multiple classification analysis were treated as universe 'ameters, and the statistic $t = (\bar{X} - u)/(s/\sqrt{N})$ was computed. This was an ex- mely conservative assumption, since in fact the means expected from the net effects culated from the multiple classification analysis are estimates of the universe parame- s and have standard errors > 0.

SUMMARY

Two alternate views regarding the effects of vertical social mobility on affiliation with voluntary associations were examined. One was represented in the socialization hypothesis; the other, in the dissociation hypothesis. I concluded that vertical social mobility had no marked effect on the number of affiliations with voluntary associations. Although substantial differences in the number of memberships were noted according to the categories of social class statuses of origin and destination, these differences were reproduced with a high level of integrity by an additive model which took into account the independent effects of origin and destination statuses. Differences were thus accounted for by the forces associated with origin and destination statuses to which mobile individuals had been exposed. Future research regarding the consequences of social mobility must take into account the independent effects of the variables used to define mobility status. Many of the apparent mobility effects found in past studies of mobility may be due to independent origin and destination effects, rather than to pathological complications of mobility experience.

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Religious and Class Bases of Political Conflict in Italy[1]

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This paper analyzes the comparative roles of religious and class cl ages in the political conflicts of one industrial society, Italy. The show that one aspect of religious status—degree of associationa volvement—provides a useful perspective for the examination of litical conflict. The religious factor contributes to the polarizatio political interests somewhat independently of social class. Absten from church ritual characterizes at least one-half of the membersh each of three classes—urban working, middle, and agrarian—and strongly linked with an increased propensity for leftist politics i three classes. Evidence suggests the existence of strong feeling resentment toward a sacred authority deemed out of touch with problems of life in industrial society. Finally, the data suggest that political consequences of religious cleavages are greater in the url industrial culture of northern Italy than in the rural-peasant cul of the South. This may reflect not only the significant regional clea that characterizes the political culture of Italy but also a histo increase in the sharpness of social cleavages and in the level of conf

A dominant theme of recent stratification literature has been the expl tion of changes in the foundation of political cleavages and conflict an how these changes relate to variables of economic development. One of central issues has to do with the configuration of politics in advanced dustrial society, namely, the hypothesized demise of political conflicts plicated in social class. While it is often acknowledged that alterations in pattern of political-interest differentiations have occurred, the nature consequences of the underlying structural changes are still the subjec some fair amount of debate. The literature is far too extensive to docum fully here, but representative examples include Geiger (1949), Mars (1950), Schumpeter (1951), Parsons (1954), Dahrendorf (1959), K hauser (1959), Bell (1960), and Lipset (1963). Various interpretations h been offered. One, for example, contends that advanced industrialism led to a net reduction of political conflict, primarily because class conf the fundamental source of cleavage in modern history, has itself subside a result of the fruits of economic expansion and a gradual movement tow equalitarian distributions of rewards.[2] The imagery evoked is that

[1] Special acknowledgment is due Joseph Lopreato for kindly making the data avail and for many valuable criticisms in the preparation of this paper, and also to L Schneider and Norman Birnbaum for their carefully critical readings of an earlier d

[2] Marshall's (1950;1965) theory of an increasing institutionalization of the equalita status of citizenship speaks of the demise of class conflict in advanced industrial soci

large middle mass, whose ideological batteries have discharged, and of a party structure to match.[3]

In contrast, a second interpretation argues that while class distinctions may no longer account for the full range of political conflict, new cleavages have emerged in industrial society with the result that conflicts are "manifested by new and more differentiated social groupings" and interests (Janowitz and Segal 1967, p. 602). Instead of a depletion of ideological tensions, this latter interpretation speaks of a more heterogeneous basis for conflict as new sources of cleavages are opened to interact complexly with the old.

Of the many possible sources of cleavage in society, religion historically ranks as one of the most potent. As a system of beliefs, it stipulates definitions of what is real and valuable in human existence and what is mere sham or fraud. It defines the content of such notions as "justice" and "legitimate expectations"; and even though the focal point of such definitions often lies in some "other world," the implicit valuations can turn back upon the reality of the present world, via ritual expressions of "the providential nature of the social order," and work their effects (Durkheim 1951, p. 254). In consequence, the disagreements and schisms of competing religious systems, or the internal tensions of one religion, become translated into the terminology of political conflict.

This paper examines aspects of the religious factor in political conflict through an analysis of survey data regarding the patterns of social cleavage in Italy.[4] The analysis treats specific issues, such as the role of religious vis-à-vis class factors in the differentiation of political interests in industrial society, and also implicitly evaluates the competing interpretations of the consequences for political conflict of post-Marxian changes in stratification.

Until a few decades ago, conceptualizations of political conflict centered almost exclusively around the economic distinction of social class. Religion's contribution within this framework was described in largely passive terms as the purveyance of a legitimizing acquiescence—the "opium" of the dispossessed.[5] Beginning with some empirical investigations of voting

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in terms of the degeneration of classes as homogeneous interest groups determined by the economic relationships of production. But, as Dahrendorf (1959, pp. 105 ff.), among others, has noted, Marshall's theory does not properly belong to the same school as the "end of ideology" and "mass society" arguments, since it at least implicitly points to the existence of new criteria of cleavage and conflict.

[3] For a comparative treatment of this and the following interpretation, see Janowitz and Segal (1967).

[4] Data for the study are from a national survey of the social stratification of Italy, directed by Joseph Lopreato. Interviews of 1,569 adult male family heads were conducted during December 1963 and January 1964 by DOXA for Milan, Italy. The effective sample size for the present analysis is reduced to 852, due to the exclusion of students, retired persons, and the unemployed, as well as persons for whom necessary information was lacking. The few non-Catholic and "nonbelieving" interviewees in the original sample are also excluded, for reasons to be discussed below.

[5] This characterized not only Marx's (1963, pp. 43–44) conception—"Religion is the sigh of a creature in distress, the heart of a heartless world, the spirit of times without spirit. It

behavior in the 1940s (e.g., Lazarsfeld, Berelson, and Daudet 1944; Berelson, Lazarsfeld, and McPhee 1954; Lipset, et al. 1954), however, evidence suggested that the religious factor plays a more active role in the formation of conflicts and that it does so somewhat independently of social class. Subsequent research in both Europe and the United States confirmed these findings. Lenski (1963, pp. 139, 324–27) concluded from his analysis of the Detroit Area Study data that the religious factor may be at least as efficient as social class in predicting political preferences. Glock and Stark (1965, pp. 205 ff.) report similar findings from their secondary analyses of national survey data from France, the Netherlands, Great Britain, and the United States. Furthermore, the evidence indicates that the (partially) class-independent linkage between religious status and political interest pertains to status variations internal to one confession (such as degree of involvement in church ritual) as well as to distinctions among confessions (Lenski 1963, pp. 175–76).

A number of questions remain to be investigated. For instance, assuming that the religious and class factors in political conflict are in fact somewhat independent of each other, their conjoint effects on the party alignments of a given population have yet to be fully explored. The second of the interpretations discussed earlier would predict that variations in religious status alter the existing class-based political conflicts under conditions of advanced industrialism but not, presumably, under conditions of pre- or early industrial development. But do these variations operate in conjunction with social class such as to increase or decrease the level of conflict? And are there, in the first place, different relationships between class and religious cleavages according to the stage of economic development?

These questions serve as guides to our analysis of the patterns of cleavage in Italian society. The strategy is to (1) attempt a replication of previous findings regarding the relative impact of religious status and social class on the differentiation of political interests, (2) examine the comparative effects of religious status and social class on political interests, and (3) consider the role of economic development with regard to those effects.

ITALY AS A CASE ANALYSIS

Italy is particularly well suited to a case analysis of these issues for a number of reasons, First, it is in practice a "confessional state," with one very dominant religion and few minority socioreligious groups. Moreover, it has been and is still relatively free of periodic sectarian movements, which means that religious beliefs and practices no longer observed by the people of Italy are seldom replaced by new ones (see Spiro 1957). We can therefore restrict our analysis to the cleavages engendered by one relatively homogeneous confession, Catholicism, and especially to the possible conflicts that lie in the distinctions between the practicing Catholic and his noninvolved brethren.

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is the *opium* of the people"—but also, for example, Weber's (1968, chap. 6) and Nietzsche's (1954).

Second, the political life of Italy has been marked by cycles of turbulence, a fact underscored by the thirty governments that Italians have witnessed in the course of little more than two decades, including most recently the inept breakup of the Center-Left coalition. Superficially, at least, the major issues of party competition encompass conflicts over ultimate goals, such as the proper distribution of rewards in society, and not just different means to the attainment of essentially identical goals. These issues are apparent at the grass-roots level in the broad spectrum of parties and programs from which the voter can choose—from the Communists and Socialists on the left to the Christian Democrats (DC) in the center and the Monarchists and neofascist Italian Social Movement Party (MSI) on the far right.

Third, Italy is one of the more recent countries to undergo an advanced stage of industrial development. More significant, however, is the fact that development has been so geographically uneven that there are "two Italys" in the sense of economic structures, styles of life, and knowledge systems: the urban-industrial North and the rural-peasant South (see Lopreato 1967; Lutz 1962). This regional cleavage makes possible an analysis of the historical dimensions of the religion-class-politics linkages, that is, the role played by stage of economic development. Although our data are not longitudinal and therefore not properly historical in applicability, a comparison of the two cultures with regard to these linkages should nevertheless provide some indication of the political consequences of recent changes in the patterns of social cleavage.

It is important to note, in this regard, that institutionalized religion in Italy, as in France and elsewhere, experienced the industrial revolution "without noticing the abrupt appearance of a new social class of industrial workers . . . and above all, without understanding the new missionary problems" to which that transformation gave birth (Maury 1959, p. 31). Indeed, it has been only recently, and usually in reaction to the strength of Communist organization, especially in the trade unions, that the Church has concretely responded to the problems of the industrial working class—for example, the worker-priest movement.[6] Rather than confront the industrial workers' problems at their onset, the Church buttressed its long-standing alliance with the secular ruling elite, including the new industrial elite of capitalists and entrepreneurs. It supported the continuation of an industrial order that is at one and the same time characterized by a paternalistic tradition which pronounces the master as guardian of his dependents and by an exploitative tradition which rejects all notions that "wealth should be subject to limitation or that vast fortunes should not be transmitted wholesale from generation to generation" (Jemolo 1960, p. 334). Recalling Niebuhr's (1929, pp. 72–76; also Lipset 1963, pp. 97–100) thesis, in other words, religion abdicated the banner of social idealism and hope, and radical politics readily retrieved it.

Whereas in some European countries during the early decades of the twentieth century—notably, the Netherlands, England, Switzerland, and

[6] For discussion of the interesting but ill-fated effort to take the Church into the factory, see Edwards (1961).

Germany—there were efforts toward the formation of a "Christian socialism," conceived as a solution to the growing threat of a coarse and "godless" socialism,[7] in Italy the two realms of radical politics and institutionalized religion were separated by a virtual chasm. With the introduction of fascism in the 1920s the chasm widened, and in 1931 it received the legitimacy of sacred authority via the papal encyclical, *Quadragesimo Anno*, which declared socialism totally contrary to Christianity. Nearly a half-century earlier, *Rerum Novarum*, observing that "labour is not a commodity subject to the law of supply and demand,"[8] had set forth the Church's answer to the ills of the industrial proletariat in terms that promised to forge a united front composed of the Church and at least some segments of the socialist movement. It had, *inter alia*, acceded to the socialist demand for class organization and purposive manipulation of the economic machinery of society. But the promises were cashed into few concrete results. Following the 1931 encyclical and continuing to the famous "opening to the left" of 1963, relations between the Church and socialism were at best mutually antagonistic. Indeed, the opening to the left itself only superficially veils the fact that strong Catholic forces within the DC have not appreciably altered their hostile views toward socialism (see LaPalombara 1964, pp. 85–86).

METHODS AND DATA

For present purposes, social class is defined in occupational terms, with nonmanual positions identified as "middle class," manual positions as "working class," and small-farm owners and sharecroppers as "agrarian." Political interests are designated "leftist," "centrist," or "rightist" according to the interviewee's nomination of the one political party that "best defends [his] interests."[9] The economic-development issue, while admittedly more complex than our measure would imply, can be handled reasonably well along geographical lines. The peasant culture in point here is generally coterminous with the eight southernmost regions of Italy.

[7] "It must be Christianized or it will shake Christianity to its foundation, precisely because it appeals to the higher and not the lower instincts of man."—John Malcolm Ludlow, early founder of the Christian Socialist Movement in England, speaking of socialism in a letter to Frederick Denison Maurice, 1848. Quoted in Miller and Fletcher (1930; pp. 8–9).

[8] The entire passage, from Georges Bernanos's *Diary of a Country Priest* (1936), is worth quoting: "You read it quietly today, skimming through it, like any Lenten pastoral. But when it came out, my friend, we seemed to feel the earth rock under our feet. Talk about enthusiasm! I was parish priest of Norenfonts then, right in the coalfield. That simple idea that labour is not a commodity subject to the law of supply and demand, that it is wrong to speculate in wages or men's lives as if they were wheat or sugar or coffee—believe me, it shook people's consciences!" Quoted in Fogarty (1957, p. 342). See also Fremantle (1956).

[9] The interview question read: "In your opinion, which party in Italy best defends the interests of people like you?" See table 1 for the response categorization.

We therefore take the northern boundary of this area as the demarcation between the predominantly industrial-urban and the predominantly peasant-rural cultures.[10]

Religious involvement—that is, the degree of associational involvement in the Church, as measured by extent and frequency of participation in the Church's rituals[11]—is used as the specification of religious status. The following query was put to each interviewee: "Please observe the phrases listed on this card concerning religion. Which one would you choose to describe yourself?" Seven options were provided:

1. I don't believe in any religion.
2. I am not a Catholic, but a . . . .
3. I am a believer, but not a churchgoer.
4. I go to Mass irregularly, but I believe.
5. I go to Mass regularly.
6. I receive Communion at least two or three times a year.
7. I receive Communion at least once a month.

The first two options are excluded from the analysis because of small numbers.[12] Options 3 and 4 define a marginal relationship between individual and Church in the sense that, while the person acknowledges some commonality of belief with the Church, he partakes of the Church's associational life only sporadically or not at all. For want of a better term, these respondents are designated "marginal" Catholics. Options 6 and 7, conversely, define a relationship in which the individual rather strictly observes the ritual obligations of the Church and thus exhibits a higher degree of associational involvement. These respondents are termed the "strict" Catholics. Finally, option 5 defines an intermediate relationship of moderate involvement—hence, the "moderate" Catholics. It can be seen from this classification of the self-description that, to the extent differences in associational involvement mirror different evaluations of the Church, the marginal Catholics are the least positive, and the strict Catholics the most positive, in their conceptions of the Church.

FINDINGS: RELIGION AND CLASS

Table 1 examines differences among the three social classes by party preference. It is immediately clear from these data that class differences are a major stimulus to the formation of political divisions in Italy. Moving across the table, we see that identifications of common interest with leftist

[10] The South, then, consists of Abruzzi, Basilicata, Calabria, Campania, Molise, Puglie, and the islands of Sardinia and Sicily. Data for Sardinia are not available, however.

[11] We are here following Lenski's (1963, 18–24) distinction between the associational and the communal aspects of religious behavior.

[12] Approximately 3 percent ($N = 50$) of the 1,569 adult males in the original sample defined themselves as nonbelievers, and less than 1 percent ($N = 14$) as non-Catholics. Ninety-four percent ($N = 1,482$) defined themselves as Catholics, at least in belief. The remaining 23 sample members either did not respond or gave an answer other than one of those listed on the card.

parties systematically decrease, while preferences for parties of the center (primarily the DC) increase in roughly the same proportion.[13]

At the same time, the data presented in table 2 indicate that the religious factor also offers an important perspective for the examination of political conflict. Although the measures of the two independent variables have not

TABLE 1

POLITICAL INTEREST AND SOCIAL CLASS

Political Interest*	Working Class	Middle Class	Agrarian Class
Leftist	68	47	37
Centrist	28	34	57
Rightist	4	19	6
Total	100	100	100
(*N*)	(392)	(230)	(230)

NOTE.—$\chi^2 = 106.6$; $p < .001$; $\tau_b = .06$.

* "Leftist" includes the Communist, Socialist, and Social Democratic parties; "Centrist," the Republican and Christian Democratic parties; "Rightist," the *Liberale*, Social Movement, and Monarchist parties.

TABLE 2

POLITICAL INTEREST AND RELIGIOUS INVOLVEMENT

Political Interest	Marginal Catholic	Moderate Catholic	Strict Catholic
Leftist	68	34	24
Centrist	23	58	67
Rightist	9	8	8
Total	100	100	99
(*N*)	(537)	(183)	(132)

NOTE.—$\chi^2 = 141.9$; $p < .001$; $\tau_b = .11$.

been logically interrelated, a rough juxtaposition of tables 1 and 2 reveals that the differences in leftist party choices by social class are smaller than the corresponding differences by religious involvement. Moreover, the measures of associative strength (τ_b) recorded in the tables suggest that the linkage between religion and politics is nearly twice as strong as that

[13] The relatively higher proportion of rightist choices among the middle-class respondents can be accounted for by the fact that, as constructed here, the middle class contains a few persons who would be better designated as "upper class" and who more frequently identify with rightist parties. At the same time, incidentally, the lower strata of our middle class, while occupants of white-collar positions, are nearly as likely as skilled laborers to align themselves with leftist parties. See, on this matter, Dahrendorf (1959, pp. 55–56) and Lopreato (1968).

between social classes and politics (see Blalock 1960, pp. 232–34). Conceivably one could argue from these findings that the religious factor is in some sense more significant than social class in supplying the seeds of political conflict.

Before placing too much emphasis on the above comparisons, however, the further question of the relationship between the independent variables themselves should be examined. If, as much of the literature on "religious alienation" would lead us to believe,[14] nonparticipation in Church ritual is specific to the working-class population, then a connection between leftist politics and nonparticipation necessarily follows as a simple function of the prior linkage between class and politics, and religious involvement per se has little bearing on political interests (see e.g., Lipset 1963, pp. 257–60, 307–08). But our data indicate otherwise. Noninvolvement is

TABLE 3

POLITICAL INTEREST, BY RELIGIOUS INVOLVEMENT AND SOCIAL CLASS

Political Interest	Working Class			Middle Class			Agrarian Class		
	Mar.	Mod.	St.	Mar.	Mod.	St.	Mar.	Mod.	St.
Leftist	79	42	37	61	33	16	50	27	17
Centrist	17	56	61	18	54	59	44	64	80
Rightist	4	2	2	21	12	24	6	9	2
Total	100	100	100	100	99	99	100	100	99
(*N*)	(284)	(59)	(49)	(136)	(57)	(37)	(117)	(67)	(46)

NOTE.—$p < .001$ for each of the three subtables.

not an exclusive property of our working-class respondents. Although approximately three-fourths of the urban workers are marginal to the Church, so are three-fifths of the middle-class and one-half of the agrarian sample members. These differences are large enough to be statistically significant, thereby stating a probable relationship between religious practice and social class. But considering the magnitude of the proportions just noted, it would require a rather difficult stretch of the imagination to interpret these data as indicative of a peculiarly *working-class* phenomenon.

Since social class and religious involvement are not completely independent of each other (as we have just seen, they are weakly related), a clearer picture of the separate influence of each on political interests depends upon the insertion of a control for their interactive effects. Once this is done (table 3), the religious factor still emerges as the stronger predictor; it produces the greater polarization of party choices. Within-class differences in political interests, by degree of religious involvement, are greater than differences between classes without the control for re-

[14] The bibliography on the so-called working-class alienation phenomenon has become rather sizeable. It includes Lenski (1963), Glock and Stark (1965), Demerath (1965), Wickham (1957), Fogarty (1957, esp. pp. 348–57), Pin (1964), Isambert (1964), and Boulard (1960).

ligious involvement. Thus, between the working and middle classes the difference in "percentage leftist" is 21 percent (table 1), whereas between the marginals and moderates of the working class (table 3) the difference is 37 percent and of the middle class, 28 percent. The comparisons are even more pronounced with regard to differences in the percentage of centrist political interest. For example, the difference between the working and middle classes is only 6 percentage points in favor of the latter (table 1). But *within* each class the differentiation of centrist choices between marginals and moderates is substantial: 39 percent for the working class and 36 percent for the middle class. (Intraclass differentiations between the moderate and strict Catholics are comparatively very small, thus indicating that the significant cleavage is between the marginals and all other Catholics.)

The comparisons just presented also describe certain features of the conjoint effects of social class and religious involvement on political interests. Note first that their separate influences pertain by and large to different sections of the political-interest spectrum. That is, variations in religious involvement influence the probability of leftist and centrist party choices. Social class distinctions, on the other hand, relate to the entire range of interests, with the working and middle classes differing most in the probability of leftist and rightist choices, and the working and agrarian classes differing most in the probability of leftist and centrist choices.

The narrower scope of influence associated with religious involvement is not altogether surprising, inasmuch as the conflicts implicit in disengagement from the Church are politically bounded by the strong endorsements that both centrist and (all but the *Liberale*) rightist parties typically give the alleged virtues of obedient religious practice. This, along with the centrist location of the Church-supported DC,[15] means that if the nonparticipant alters his political identifications, it will most likely be in a leftward direction. The consequence is that religious and class cleavages combined produce sharper differentiations of leftist from centrist politics. To put it otherwise, for many areas of Italy this amounts to a fracture between the Communist and Socialist parties on the one side and the DC and all parties to their right on the other side. In table 1 we found that when the differences in ritual involvement are ignored, 68 percent of the 392 urban workers identify with leftist parties, 28 percent with centrist parties, and the remaining 4 percent with rightist parties. But among the 284 urban workers who are marginal to the Church (table 3), the respective proportions are instead 79, 17, and 4 percent; among those few ($N = 49$) who are strictly observant of Church ritual, the proportions are 37, 61, and 2 percent. Or, to take a more extreme contrast, the agrarian class as a whole has traditionally formed the single largest and most stable base of support for centrist parties generally and, in recent history, for the DC in particular, yet the 51 percent ($N = 117$) of the agrarians who are mar-

[15] Strictly speaking, the DC is not a "Church party"; but it counts among its major supporters and recruiters both local clergy and Catholic Action committees.

ginal Catholics are more often leftist than the religious moderates of the working class!

Thus, major cleavages stemming from the religious institutions of Italy further radicalize a polity that already exhibits strong leftist tendencies because of conflicts of interest which, following classical theory, may be said to exist in the economic sphere. As table 3 has demonstrated, the most significant division in the religious factor, from a political standpoint, is that which divides the moderate and strict Catholics from their less satisfied brethren, the marginals. For these latter people, the experience of the division and its preconditions gains expression in the politics of radical *caesura*. At base it is an expression of resentment, the kind of resentment that Nietzsche (1954, p. 451) described as characteristic of "those who are denied the real reaction, that of the deed, and who compensate with an imaginary revenge." It is spawned by that peculiar religious ethic which promises God's vengeance upon the privileged few whose "sinfulness and illegalities" create and then sustain the unequal distribution of material rewards (Weber 1968, pp. 494, 497). In the present instance, the imaginary revenge extends to the earthly manifestation of sacred authority itself; the Church has grown increasingly symbolic of, and hence is deemed responsible for, the conflict between "the social claims based on God's promises" and the actual circumstances of life. It is this dilemma, albeit dressed in a slightly newer garb, which Nietzsche (1967, n. 179) identifies as "the psychological problem of Christianity."

The resentment expressed in disengagement from the Church is in many respects parallel to the class-implicated "Marxian" resentment of an unjust secular authority. It differs to the degree that it cuts across class boundaries. The specific reasons for an individual's noninvolvement in Church ritual undoubtedly vary to some extent as a function of class-related factors. Pin's (1964) analysis of the "religious approaches of bourgeois, proletarian, and peasant," although based on the attitudes of a sample of "practicing" Catholics, suggests as much—as does, of course, Weber's (1968, pp. 468–92; see also Demerath 1965). People of different social and economic standing expect different rewards from their investments of conformity to Church ritual. But it is nonetheless significant that institutionalized religion fails to engage the active interests of large segments of those who are more fortunate in economic and social benefits at the same time that it ceases to serve as the "opium" of a large number of those at or near the bottom of the hierarchy of benefits. The consequence is an intensification of political conflict beyond the level generated by class distinctions alone.

FINDINGS: REGIONAL DIFFERENCES

Further insight into the dimensions of this intensification of conflict can be acquired from a comparative analysis of the "two Italys" and their distinctive patterns of social cleavage. Table 4 reports the interrelations of religious involvement, social class, and political interest, with the further control for region of economic development.

The first conclusion from these data is that political interests are more polarized in the North than in the South. This is apparent even from a social class comparison that ignores the influence of the religious factor. Overall, the people of the South are more frequently centrist oriented (43 versus 34 percent for the North), and the differences among them by social class are smaller than the corresponding differences among their urban-industrial compatriots.[16]

TABLE 4

POLITICAL INTEREST, BY RELIGIOUS INVOLVEMENT, SOCIAL CLASS, AND REGION OF ECONOMIC DEVELOPMENT

Political Interest	Working Class			Middle Class			Agrarian Class		
	Mar.	Mod.	St.	Mar.	Mod.	St.	Mar.	Mod.	St.
North:									
Leftist	83	46	32	61	33	19	50	18	20
Centrist	13	52	65	19	49	56	43	79	80
Rightist	4	2	3	20	18	26	7	4	0
Total	100	100	100	100	100	101	100	101	100
(*N*)	(198)	(46)	(31)	(94)	(39)	(27)	(42)	(28)	(25)
South:									
Leftist	70	31	44	62	33	10	51	33	14
Centrist	26	69	56	17	67	70	44	54	81
Rightist	5	0	0	21	0	20	5	13	5
Total	101	100	100	100	100	100	100	100	100
(*N*)	(86)	(13)	(18)	(42)	(18)	(10)	(75)	(39)	(21)

NOTE.—$p < .05$ for each of the six subtables.

A second conclusion is that the intensifying influence of religious involvement on political conflict occurs predominantly in the urban-industrial culture of northern Italy, where four of every five marginal-Catholic urban workers identify with leftist political interests and an equivalent proportion of the strict-Catholic agrarians identify with centrist political interests.[17] Class-based conflicts in the South, on the other hand, appear

[16] The data (percentage "leftist") are shown in following table.

	Working Class (%)	Middle Class (%)	Agrarian Class (%)
North	71	47	33
South	62	47	40

[17] The *N*'s in table 4 show that regional differences in the class-religious involvement linkage are insignificant for all but the agrarians. Fifty-six percent of the southern agrarians—impoverished peasantry mostly—attend Mass irregularly or not at all. This contrasts with 44 percent of the northern "industrialized" agrarians.

to be affected by religious cleavages only slightly if at all. Extrapolating from table 4, and using procedures of averaged percentage differences, we find that the differences between the proportion of working-class and the proportion of middle-class respondents choosing leftist parties, with and without a control for religious involvement and by region of economic development, are those shown in the following table.

	North (%)	South (%)
With control.......	+16	+13
Without control....	+24	+15

In other words, in a comparison of the working and middle classes, the religious factor substantially adds to the polarization of political interests in the North (24 vs. 16 percent), but not in the South (15 vs. 13 percent).

This regional difference in the political consequences of religious involvement is for the most part a characteristic of only the working and agrarian classes. The marginal-Catholic sections of the two classes show this the most clearly.[18] For instance, 83 percent of the marginal-Catholic industrial workers, versus 70 percent of the working-class marginals in the South (or a difference of 13 percent), look to the Communists, Socialists, or Social Democrats for defense of their interests. For the class as a whole, however, the North-South difference is reduced to only 9 percent. Similarly, within the agrarian class the southerners exhibit a slightly stronger tendency toward leftist politics (40 vs. 33 percent). But when the marginal-Catholic agrarians are singled out for examination, this original 7 percent difference diminishes to only 1 percent. By contrast, North-South differences in "percentage leftist" responses within the middle class are the same, whether comparison is for the class as a whole or for only the marginal-Catholic section.

As Pin (1964, p. 416) cogently states the case for the urban working class, they had expected "neither immediate results ... nor a simple, artificial, communal life imposed on a world of unjust inequality, but rather a felt communion of action toward justice." The Church did not provide that sort of communion, but leftist politics increasingly did. And, understandably, the promise of socialism's trumpet has proved distinctly more pleasing than the promise of Gabriel's. Thus, as we have seen, noninvolvement in the Church is closely associated with an increased probability of orientation toward leftist politics within the working and agrarian classes, particularly those of the urban-industrial culture of northern Italy.

What accounts for the regional difference in the political consequences of religious involvement? Southern Italians are about as likely to be noninvolved in the Church, class by class, as their compatriots to the north. Yet for the southern marginal Catholics, the fact of noninvolvement is

[18] Small *N*'s for the moderate and strict Catholic sections of the southern working and middle classes make comparisons involving these subsamples open to question.

not converted into the currency of radical politics to the degree that it is in the North.[19] There is one exception to this: the religious marginals of the middle class. But since their class membership entitles them to a disproportionate share of the available economic surplus regardless of region, the sociocultural experience of uneven development plays a smaller role in determining the political consequences of disengagement from the Church. For the working-class and agrarian populations, however, the material conditions of life are more precarious in the South (see Lopreato 1967; Lutz 1962). Consequently, their range of profitable behaviors is more sharply curtailed—both in the sense of economic action and in the availability of political alternatives.

The recruitment of political support in Italy is characterized by what LaPalombara, (1964, pp. 262 ff.) has described as the *clientele* relationship, that is, a relationship of cooperative self-interest between the party (and governmental) bureaucracy and various publicly and privately organized interest groups, such as Catholic Action and the General Confederation of Italian Industry (the two most powerful). The relationship is established when an interest group is defined by a given bureaucracy as "the natural expression and representative of a given social sector," which sector becomes in turn "the natural target or reference point" for the bureaucracy's services.[20]

One of the products of this system of political access is a tendency to, in effect, sell one's vote to the highest bidder. Among the northern working and agrarian classes, the highest bidder is frequently a party of the Left—especially if the class member is also marginal to the Church and therefore comparatively free of cross-pressures from that direction. The currency of the transaction is apt to be the promise of major long-range benefits. But in the South the choices open to the peasant are significantly fewer. Leftist politics has barely the kernel of effective organization, partly because a large industrial base of recruitment is lacking but also because of the peasant's cynicism—born of the long tradition of poverty and disappointment—for all political parties (see Lopreato 1967, pp. 252–57, esp. p. 255, n. 3). To use Germani's (1966, pp. 375–76) phraseology, one of the three important elements in the formation of a radical opposition to the DC is missing: there is no "available elite" to construct a synthesis of "available masses" and "available ideology." The southern peasant is left with only two options. First, since the Christian Democratic party is eager to counterbalance the heavy Communist and Socialist vote of the northern

[19] For instance, the difference in "percentage leftist" between the marginal-Catholic and moderate- and strict-Catholic (combined) urban workers in the North is 43 percent, in the South, 31 percent. Comparable differences for the agrarians are 31 percent in the North and 24 percent in the South. The regional contrast for the middle class, on the other hand, is very small (37 vs. 34 percent) and in the opposite direction (calculated from table 4).

[20] An advantage of this system of political access and support, from the viewpoint of ruling groups, is that it puts those groups which aim at a basic transformation of the existing social order at a distinct disadvantage.

regions, the peasant can offer his promise of political support in exchange for some immediate material profit. And despite any disdain for the Church, the economic conditions of life can indeed make this an attractive alternative to the marginal as well as to the moderate or strict Catholic. Second, if material circumstances permit, the peasant may simply reject the efficacy of all political parties. Data not reported in the above tables, for instance, show that the southerners more frequently than the northerners contend that "no party" best defends their interests.[21] But in any case, the southern peasant is much less likely to flaunt the village priest by openly espousing politics.

In addition to such factors of economic resource and political access, a third element may be considered. "In the sphere of proletarian rationalism, religion is generally supplanted by other ideological surrogates" (Weber 1968, p. 486). The peasant culture of southern Italy, however, is not yet imbued with a rationalistic Weltanschauung to the degree characteristic of the North. And although the southern peasant may stay away from the Church fully as often as the urban industrial worker or the "industrialized" agrarian, there still lurk in the recesses of his childhood memories remnants of that traditional fear of the Church's soteriological powers. He can alibi his absence from ritual obligations as economic necessity, an argument not readily disputable considering the almost incessant labor that family maintenance entails. But to support a political party which the Church adamantly opposes might bring the active disfavor of those powers. In short, while the industrial proletarian can forego the mystical protections of a "sacred canopy" that did not, after all, protect very well, the peasant does not yet have his ideological surrogate so well in hand.

SUMMARY

In summary, the evidence bespeaks not the existence of an inert middle mass or the decline of "ideologically intrinsic politics . . . due to the contradictions between reality and their definition of the situation" (Lipset 1964, pp. 295–96) but, on the contrary, a large and possibly growing polarization of political interests between centrist-rightist positions on the one hand and the Left on the other. The foundation of this cleavage is supplied not only by conflicts and tensions predicated in the class structure but also by conflicts grounded in the religious institutions of Italy. And this latter source of cleavage, though related to social class, touches the

[21] Among the working-class respondents, e.g., the percentages of "no party" responses are shown in the following table. The pattern of these percentages also suggests that

	Marginal (%)	Moderate (%)	Strict (%)
North........	15	19	9
South........	25	32	18

the "no party" response may represent a stepping stone from centrist to leftist parties as dissociation from the Church increases, especially in the South.

lives of people of every class. Finally, the increased polarization associated with disengagement from the Church is largely specific to the urban-industrial culture of northern Italy, and, within that, to the working and agrarian classes. It is this fact which suggests a historical increase in the polarization of political interests. As measured by degree of cleavage in party alignments, the "newer" industrial North evinces greater *dissensus* than the "older" peasant South.[22]

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[22] This finding is commensurate with Hamilton's (1967, pp. 6–7, 132–33) conclusion that among the French workers, increased polarization of political interests has been associated with economic development. "The very processes of industrialization which bring workers a considerable improvement in real income also . . . bring them into contact with more radical opinion leaders." Although present data are not adequate to a test of this thesis, it likely applies to those northward bound (to the "industrial triangle"), ex-residents of Calabria, Basilicata, Sicily, and so on. Freed from traditional restraints, both material and moral, of the southern peasant culture, and introduced to the more radical unionism of large factories and plants in the North, the aspiration levels of these migrants are quite apt to be "swiftly 'revolutionized'," as Hamilton puts it.

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The Changing Distribution of Negroes within Metropolitan Areas: The Emergence of Black Suburbs[1]

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Several studies have indicated that central cities and their suburban rings are coming to have dissimilar racial compositions. A closer examination of the data reveals that suburban rings do not have an exclusively white population. There are now, and always have been, suburban communities of blacks. In recent years, the growth of the Negro suburban population has accelerated. This growth appears concentrated in three types of areas: older suburbs which are experiencing population succession, new developments designed for Negro occupancy, and some impoverished suburban enclaves. Despite this growth, city-suburban differences in the proportion of black population are increasing, and patterns of residential segregation by race within suburbs are emerging which are similar to those found within central cities. In the past, city-suburban differences in socioeconomic status were different among whites and Negroes. Unlike whites, the blacks who lived in the suburbs were typically lower in socioeconomic status than the blacks who lived in central cities. The recent migration to the suburbs, however, is apparently selective of higher status blacks, and it is likely the census of 1970 will reveal that the socioeconomic status of suburban blacks exceeds that of central city blacks.

INTRODUCTION

After World War II, many studies claimed that new life-styles were developing within suburbia. These life-styles demanded that suburbanites be very friendly to their neighbors, spend much time on child-rearing activities, and participate in many community endeavors. Some sociologists argued that the major reason for the development of these new social patterns was that suburbs contained a young, middle-class, native American population which shared common values, unlike central cities which contained a heterogeneous population (Fava 1956; Martin 1956; Riesman 1957; Whyte 1957).

Long ago some authors had shown there was a variety of types of communities in the suburban territory surrounding central cities (Douglas 1925; Harris 1943), but further research was required to challenge the myth of suburban homogeneity. Schnore (1957, 1965) pointed out the differences in ethnic composition and socioeconomic status which could be found within the nation's suburbs. Further study found that suburban living did not

[1] This is a revised version of a paper which was delivered at the Annual Meetings of the Population Association of America, Atlantic City. New Jersey, April 11, 1969. Beverly Duncan, James Palmore, and Karl Taeuber provided helpful comments and suggestions.

completely change working-class life-styles and that middle- and working-class residents could be found within the same suburb (Dobriner 1963). The similarity of cities and suburbs was demonstrated by another investigation which showed that patterns of residential segregation common to central cities were also found in suburbs (Lieberson 1962).

Recently much publicity has been given the idea that central cities are coming to contain a principally black population while the surrounding suburbs are residential areas for whites. President Johnson's Commission on Civil Disorders stated succinctly in warning that if present trends continue there will be "a white society principally located in surburbs, in smaller central cities and in the peripheral parts of large cities and a Negro society largely concentrated within large cities" (U.S., National Advisory Commission on Civil Disorders 1968, p. 407).

This paper examines the hypothesis that cities and suburbs are coming to have racially dissimilar populations. First, historical trends in racial composition are reviewed. Second, data are examined to study the rapidity of black population growth in suburbia in recent years. Third, the socioeconomic characteristics of blacks in suburbia and those moving into suburbia are analyzed. Finally, the types of suburbs which have experienced Negro population growth are described.

HISTORICAL TRENDS

Changes since 1900 in the racial composition of central cities and the suburban area that surrounds them can be determined from census data. Figure 1 shows the proportion of the total population which was Negro in central cities and suburban rings for dates between 1900 and 1968. These figures are based on information for all the 212 Standard Metropolitan Statistical Areas (SMSA) defined in 1960. The suburban ring includes, at each date, the area which was outside the central city but within the counties comprising the SMSA in 1960. Data are shown separately for SMSAs in the North and West and for those in the South.

Central cities outside the South contained relatively few blacks prior to World War I; thereafter a cessation of European immigration combined with an influx of blacks gradually changed the racial composition of these cities. As recently as 1940, however, the proportion black was no greater than 6 percent. During and after World War II, the in-migration of Negroes continued, and, in many cities, the white population decreased. As a consequence, the proportion black in these cities went up and by the late 1960s reached 18 percent.

Very different trends characterize southern central cities. Prior to the Civil War the number of blacks in many southern cities actually decreased (Wade 1964, pp. 325–30), but after Emancipation freedmen left their plantations and between 1860 and 1870 the proportion black in southern cities rose (Farley 1968, p. 247). However, there was little change in the racial composition of these cities after 1870. While their black populations grew the cities annexed outlying territory, and their white populations have

grown at about the same rate, effecting no substantial change in their color composition. Since 1950 there has been a slight rise in the proportion black in the southern cities. If these cities, in the future, find it difficult to annex outlying areas which have rapidly growing white population, their color composition will change.

There have always been some blacks in the suburban rings which surround northern and western cities. The proportion black in these areas remained approximately 3 percent for many decades. As white suburban communities were growing, Negro suburban communities were expanding at a correspondingly rapid rate. Some of these black suburbs date from the early years of this century and have histories similar to those of white suburbs. For instance, just before 1900, a tract west of Saint Louis, Missouri, was subdivided, and lots were sold to Negroes. This suburb, called Kinloch, grew slowly for some decades but was incorporated in 1939, and by 1960 it had a population of 6,500, all but two of whom were black (Kra-

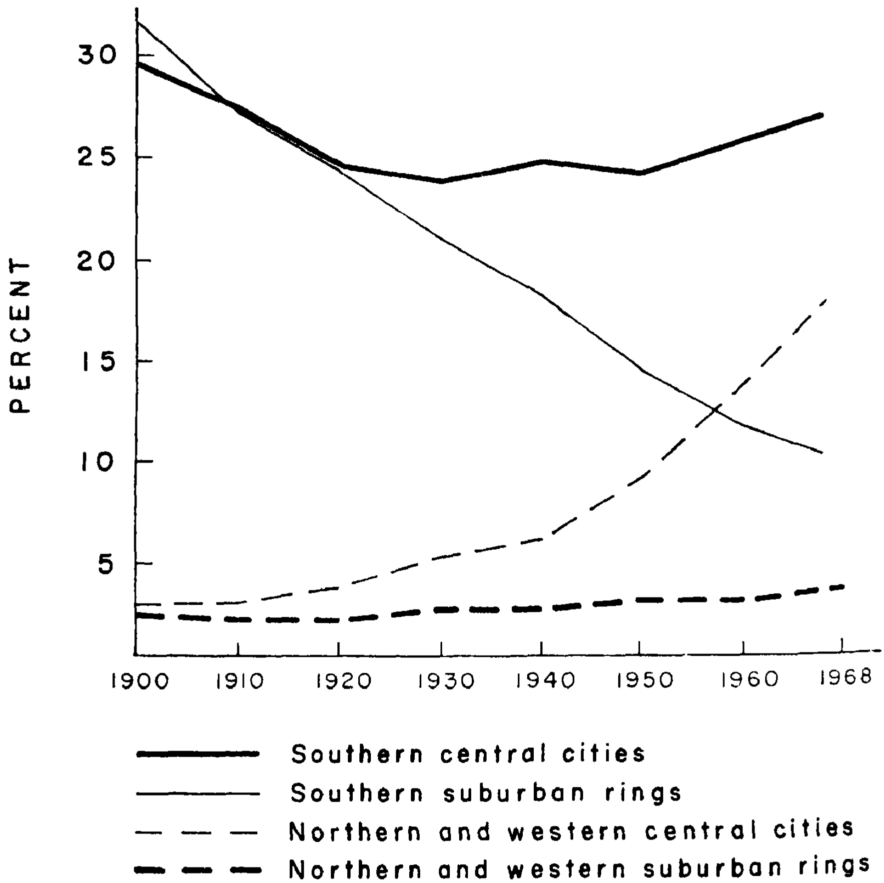


Fig. 1.—Proportion of population Negro, central cities and suburban rings, 1960–68. Source: U.S., Bureau of Census 1963, table 1; 1969*a*, p. 6.

mer and Walter 1967; U.S., Bureau of the Census 1961*a*, table 25). In the Chicago area, a Negro realtor secured land west of the city prior to World War I and sold homesites to blacks. This suburb, Robbins, was incorporated in 1917 and has continued to grow, reaching a population of 7,500 in 1960 (Rose 1965, p. 369; U.S., Bureau of the Census 1961*b*, table 25). Near Cincinnati, Ohio, the black suburb of Lincoln Heights developed during the 1920s and by 1960 had 7,800 residents (Rose 1965, p. 369; U.S., Bureau of the Census 1961*g*, table 22).

Suburban rings surrounding southern cities have undergone great change in racial composition. Early in this century, when these suburban rings contained extensive rural areas, at least one-third of the population was black. Gradually but consistently this proportion decreased, for, as southern cities grew, suburbs developed and whites moved into outlying areas. In some suburban rings whites displaced blacks (Heberle 1948, p. 34); in other suburban rings the black population continued to grow but at a slower rate than the white population. Nevertheless, black suburbs have sprung up near some major cities. For example, after World War II a suburban development for Negroes was built near Miami, Florida, and by 1960 this suburb, Richmond Heights, contained some of the nicer homes available to Miami blacks (U.S., Bureau of the Census 1962*a*, tables 37–40; Rose 1965, p. 370). In the 1950s, after an expressway cut through the black ghetto of Shreveport, Louisiana, many inexpensive homes were put up in an area to the north of the city. In 1960 North Shreveport had a black population of 8,000 (U.S., Bureau of the Census 1961*c*, table 22; 1961*f*, table 37).

RECENT TRENDS

It has been almost a decade since the last national census was conducted, so it is difficult to know exactly what population changes have occurred since 1960. However, the Census Bureau's monthly Current Population Survey, which now involves a national sample of 50,000 housing units, provides increasingly detailed information about blacks. Table 1 indicates the Negro and white populations of central cities and suburban rings in 1960 and 1968 and growth rates for the intervening period. It must be remembered that these data were obtained by sampling the population and that between 1968 and 1970 many central cities may annex outlying territory. Hence, growth rates for the 1960–70 period may differ from those for the 1960–68 span contained in table 1.

Since 1960 there has been continued growth of the black population in the nation's central cities both within and outside the South, although growth rates for the 1960s are lower than those of the 1950s (U.S., Bureau of the Census 1963*a*, table 1; 1969*a*, pp. 2–6). The white population of central cities, with the exception of western cities, has decreased, and this too continues a trend which developed in the World War II era.

The black population in suburban rings has grown quite rapidly. In the suburban rings of the North and West, the black population has increased since 1960, not only more rapidly than it did during the 1950s but more

rapidly than the white population. This has produced a slight change in the racial composition of these suburban rings as indicated by figure 1. Within southern suburban rings, the white population increased at a higher rate than the black, but the Negro population has grown more rapidly during this decade than during the last.

Despite the suburbanization of blacks, the data in both figure 1 and table 1 show that central cities are becoming more racially differentiated from their suburban rings. The proportion of population which is black is rising more rapidly in central cities than in suburban rings. This finding lends credence to the view of the Commission on Civil Disorders, but two facts should not be overlooked.

TABLE 1

CHANGE OF NEGRO AND WHITE POPULATIONS IN CENTRAL CITIES AND SUBURBAN AREAS, 1960–68*

	Negro Population			White Population		
	1960 (in Millions)	1968 (in Millions)	Average Annual Change (%)	1960 (in Millions)	1968 (in Millions)	Average Annual Change (%)
Total population of United States....	18.4	22.0	+2.2	158 7	174.0	+1 2
Northeast and North Central:						
Central cities.....	5.0	6 8	+3.8	28.6	26.4	−1 0
Suburban rings...	0.9	1.2	+3 6	31.5	37.7	+2 2
South:						
Central cities.....	3.7	4.1	+1.3	11 1	10 8	−0 3
Suburban rings...	1.4	1 6	+1 7	10.1	14.2	+4 3
West:						
Central cities.....	0.7	0 9	+3 2	8.0	8.2	+0 3
Suburban rings...	0.3	0.5	+6 4	10.3	14.0	+3 8

SOURCE.—U.S., Bureau of the Census 1969*a*, pp. 2 and 6.

* Standard metropolitan statistical areas as defined in 1960 were used in this analysis. The suburban ring includes that area outside the central city but within the standard metropolitan statistical area

First, at present blacks are a minority in most central cities. In 1965 only one of the nation's thirty largest cities, Washington, D.C., had a black majority; and in only four others (Atlanta, Georgia; Memphis, Tennessee; New Orleans, Louisiana; and Newark, New Jersey) did blacks comprise as much as 40 percent of the population (U.S., Bureau of the Census 1967*a*, p. 11). In the future some large cities in both the North and the South will have black majorities, but these cities will be the exceptions rather than the rule. If the growth rates from central cities which obtained between 1960 and 1966 continue to 1980, the proportion of population in central cities which is nonwhite will rise from 22 percent in 1966 to 32 percent in 1980. (This projection is based on figures from U.S., Bureau of the Census 1967*b*, table A. For a more elaborate set of projections, see Hodge and Hauser 1968, p. 26.) Since 1960 the rate of natural increase among blacks has de-

creased for fertility rates have fallen (U.S., Bureau of the Census 1969*d*, tables 2 and 3), and by 1967 only a little more than one million blacks remained on the nation's farms (U.S., Bureau of the Census 1969*e*, table 3). The black population is simply not growing rapidly enough, nor are there sufficient numbers of rural Negroes to radically change the racial composition of most central cities even if whites continue to move away.

Second, suburban rings do contain Negroes, and some suburban black communities, both in the North and the South, have grown in the recent past. A Census Bureau study indicates that within suburban rings the black population increased much more rapidly between 1966 and 1968 than between 1960 and 1966, although sampling variability may affect this finding (U.S., Bureau of the Census 1969*a*, p. 3).

Aggregate figures obtained from national samples of the population give no indication of which specific suburban communities have growing black populations. In both Illinois and New York, however, a number of communities have requested the Census Bureau to conduct special enumerations since 1960 because certain state appropriations are based upon the population of local areas as officially enumerated. This provides an incentive for growing suburbs to request special censuses, and in both the Chicago and New York metropolitan areas many of these have been conducted.This permits us to investigate racial change in the suburbs near the nation's two largest cities, New York and Chicago.

Negroes in the Chicago Suburban Area

A total of seventy-six places within Cook County but outside the city of Chicago, that is, suburban cities, towns, and villages, were covered by special census enumerations between 1964 and 1968. These places, in 1960, contained about five-eighths of the suburban population of Cook County (U.S., Bureau of the Census 1961*d*, table 7).

Chicago's suburban population increased rapidly after 1960. Among the places covered by special censuses, the total population went up from about one million in 1960 to one and one-third million at the special census dates (U.S., Bureau of the Census 1968*a*, table A-1; 1968*b*, table 1; 1968*c*, table 1; 1969*b*, table 1; 1969*c*, table 1). The nonwhite population increased at a higher rate than the white, affecting a small change in the proportion nonwhite in these suburbs, a rise from 2.2 precent in 1960 to 2.6 percent when the special enumerations were carried out (U.S., Bureau of the Census 1961*b*, tables 21 and 22; 1965, table 1; 1966*a*, table 1; 1967*c*, table 1; 1968*a*, table 1; 1968*b*, table 1; 1968*c*, table 1; 1969*b*, table 1; 1969*c*, table 1).

A closer examination of these data reveals that little integration has occurred. Rather than being distributed throughout the suburbs, the growth of black population has concentrated in three areas; one in Maywood, one in and around Harvey, and a third area of Chicago Heights and East Chicago Heights.

Between 1960 and 1965 the black population of Maywood doubled, increasing from 5,000 to 10,000. This is an older suburb which was settled

after the Civil War and grew rapidly when rail lines linked it to Chicago (Kitagawa and Taeuber 1963, p. 194). Maywood did not participate in the post-World War II boom; in fact, its peak growth followed World War I. It is a suburb of older, relatively less expensive homes (U.S., Bureau of the Census 1962*b*, tables 17 and 21). Maywood has experienced population replacement since 1950, for as its white population declined, its Negro population grew, while its total population has remained about constant.

The black population of Harvey, another old suburb, and the nearby but newer suburb of Markham increased. Harvey was founded in the 1890s but has continued to grow, and in recent years manufacturing firms have located in this area (U.S., Bureau of the Census 1966*b*, table 4). In 1960 the majority of blacks in Harvey lived in older homes, but one-third lived in houses which had been erected after World War II (U.S., Bureau of the Census 1962*b*, table 37). Since 1960 there has been a modest building boom in this suburb, and new construction as well as the conversion of older homes from white to Negro occupancy account for the growth of black population. Markham is a post-World War II suburb. In recent years many new single-family homes have been built, and both the white and Negro populations have increased (U.S., Bureau of the Census 1966*c*, table B-6; 1965, table 1).

The third suburban area which had a growing black population included a section of Chicago Heights and the village of East Chicago Heights. Steel and chemical plants have been in this area since the 1890s. During World War I blacks began moving into Chicago Heights, and their members rose during World War II (Kitagawa and Taeuber 1963, p. 176). A pattern of intracommunity segregation emerged; and an area separated from the rest of the suburb by a major rail line contained the black population (U.S., Bureau of the Census 1962*c*, table P-1). Bordering Chicago Heights is an area of older, low-quality homes. In 1960, 60 percent of them lacked indoor toilets and half were in deteriorating or dilapidated condition (U.S., Bureau of the Census 1962*b*, table 37). This is the suburb of East Chicago Heights. During 1964 a public housing project was started, and this along with other new construction explains the rise of black population.

Negroes in the New York Suburban Area

New York City's suburban ring, in 1960, included four counties. Those closer to the city are Nassau which lies immediately east of New York on Long Island and Westchester which is located just north of the city. The outer counties are Suffolk on Long Island and Rockland which is northwest of the city and across the Hudson River. Between 1965 and 1968 the population of this entire area was enumerated by special census except for some small enclaves. These special census data make it possible to determine the number and age of recent migrants to the suburban ring. Table 2 shows the color composition of each county, the net number of migrants and net migration rates specific for age and color. Data are shown for two sections of Suffolk County, for an area nearer the central city which was enu-

TABLE 2

Population Composition and Migration Information for Places within New York Suburban Ring Enumerated since 1960*

	Population Data				Migration Data						
	Population (in Thousands)		Racial Composition (%)			Migration Rates Per 100 Persons Present in 1960					
	1960	Later	1960	Later	Net Migrants	Total	0–9	10–19	20–34	35–49	50·
Nassau County, Area Enumerated in 1965†											
Whites . . .	1,211	1,292	97.4	96.2	+ 9,246	+ 1	+ 6	−16	+ 19	0	−
Nonwhites.	32	50	2 6	3.8	+ 7,664	+20	+25	+38	+ 9	+11	−
Entirety of Rockland County, Enumerated in 1966											
Whites . . .	118	172	95 5	97 4	+35,102	+30	+62	+ 8	+ 70	+20	+
Nonwhites.	6	8	4 5	4.6	+ 1,367	+24	+30	+29	+ 41	+10	+
Suffolk County, Area Enumerated in 1968‡											
Whites .	147	296	97 2	97.4	+95,684	+65	+67	+67	+127	+42	+2
Nonwhites	4	8	2 8	2 6	+ 2,201	+48	+59	+46	+ 88	+27	+
Suffolk County, Area Enumerated in 1967‡											
Whites . .	252	342	94 7	92 9	+48,955	+19	+22	+ 1	+ 50	+11	+
Nonwhites	14	24	5 3	7.1	+ 6,090	+42	+54	+47	+ 70	+21	+1
Entirety of Westchester County, Enumerated in 1965											
Whites. . .	743	775	92 4	91.4	+ 172	0	+ 4	− 5	+ 11	+ 3	−
Nonwhites	61	73	7 6	8.6	+ 6,977	+11	+18	+27	+ 16	+ 4	−
Mount Vernon City, Enumerated in 1965											
Whites . . .	61	53	80.1	72 6	− 8,543	−14	−25	−14	− 18	− 6	−1
Nonwhites	15	20	19 9	27 4	+ 3,244	+22	+17	+27	+ 33	+17	+
New Rochelle City, Enumerated in 1965											
Whites .	66	65	86 4	86 4	− 3,480	− 5	− 5	− 5	− 1	− 1	−1
Nonwhites	10	10	13 6	13 6	− 698	− 7	−10	+ 8	− 8	−10	−1
White Plains City, Enumerated in 1965											
Whites . .	44	43	88 1	86.4	− 1,953	− 4	− 4	− 9	+ 1	0	−
Nonwhites.	6	7	11 9	13 6	+ 376	+ 6	− 3	+28	+ 13	+ 1	−1
Yonkers City, Enumerated in 1965											
Whites . . .	183	191	95.8	94 5	− 250	0	− 5	+ 4	+ 5	+ 4	−
Nonwhites.	8	11	4.2	5.5	+ 1,732	+22	+21	+18	+ 30	+16	−1
Balance of Westchester County, Enumerated in 1965											
Whites . .	389	423	94 8	94.4	+14,398	+ 4	+12	−11	+ 29	+ 4	−
Nonwhites.	21	25	5 2	5.6	+ 2,323	+10	+32	+18	+ 11	0	−

Sources —U.S., Bureau of the Census 1962*d*, table P-1; 1966*d*, table 2; 1966*e*, table 2; 1966*f*, table : 1966*g*, table 2, 1967*e*, table 2; 1967*f*, table 2; 1968*h*, table 2; 1968*i*, table 2.

* Data in this table refer to nonwhites. The proportion of nonwhites who were Negroes ranged fro 93 percent in Nassau County in 1960 to 99 percent in Mount Vernon in 1965. This suburban ring contai six large mental hospitals and one prison. To eliminate changes in the number of inmates, data for cens tracts containing these institutions were not used in these computations. Migration estimates refer to a groups alive in 1960. No estimates were made of the migration of people who were born since 1960.

† Hempstead, North Hempstead, and Oyster Bay towns were enumerated in 1965. These towns co tained 96 percent of the total Nassau County population in 1960.

‡ Brookhaven and Smithtown towns were enumerated in 1968. These towns contained 24 percent Suffolk County's population in 1960. Babylon and Huntington towns were enumerated in 1967. The contained 40 percent of Suffolk County's population in 1960.

merated in 1967, and for an area further from the city which was counted one year later.

The figures in table 2 indicate, first, that the Negro population of the suburban ring has grown since 1960; by the mid-1960s there were at least 175,000 blacks in these suburbs. In each suburban area, except the outer towns of Suffolk County, the Negro population increased more rapidly than the white, producing a small rise in the proportion black within the New York suburban ring.

Second, Negro population growth has occurred not only because of natural increase but also because blacks are migrating into these suburbs. Examination of the migration rates reveals that the highest rates were for the age groups 20–34 and 0–4 in 1960. This indicates that black families headed by young adults along with their young children are moving into the suburban ring.

Third, there are racial differences in growth rates and migration patterns. Population growth has been very slow in the suburban counties closer to New York. These counties attracted whites who were in the early stages of family formation but lost about an equal number of teen-agers and older whites, so their net migration rates for whites were near zero. The outer counties, Suffolk and Rockland, have grown rapidly and attracted whites of all ages. Black population growth has occurred in all counties, but the largest increases in numbers occurred within the suburban areas nearer New York City.

Long Island will be considered first in investigating which suburbs have growing black populations. Although there are few incorporated cities on Long Island, census tracts—that is, geographical areas containing about 5,000 people—were defined for the entire area in 1960, and special census tabulations have been presented for these same areas. Twenty-two census tracts on Long Island had increases of 250 or more blacks between 1960 and the special census date. They can be divided into two groups.

One group, located principally within the county near New York, gained Negroes and lost whites while the total population remained about constant. The homes in these census tracts were older than was typical for Long Island (U.S., Bureau of the Census 1962*d*, table H-1). Population replacement occurred in these suburbs. The second group of tracts, most of them within Suffolk County, gained large numbers of both Negroes and whites. Many new homes must have been built to accommodate these population increases, although it is impossible to determine from special census data the number of new homes or the race of their occupants. The Census of 1970 will reveal more about these suburban areas which gained both whites and Negroes and will indicate whether blacks have occupied new homes or have replaced whites in older homes.

Most of the recent growth of black population within Westchester County has taken place within four suburbs. Mount Vernon, New Rochelle, White Plains, and Yonkers are large and older suburbs. World War I interrupted their period of most rapid growth. While the number of blacks in each of these suburbs increased, their patterns of demographic change

were quite different. These same patterns of change undoubtedly are occurring in central cities and suburbs throughout the nation. Table 2 presents data for each of these suburbs.

Mount Vernon exemplifies a common pattern of change. This suburb lost whites and gained Negroes while its total population slowly declined. By 1965, one quarter of the population was black. The tracks of the New York, New Haven and Hartford Railroad bisect Mount Vernon. In 1960 the area south of the railroad was racially mixed, but since then whites have moved away and Negroes moved in. If the patterns of racial change observed in large cities in the 1940s and 1950s (Duncan and Duncan 1957, chap. 6; Taeuber and Taeuber 1965*a*, chap. 5) are duplicated in Mount Vernon, whites will continue to leave and the southern half will soon be a black ghetto of 30,000. North of the rail line there has been little population change. The area was 98 percent white in 1960 and 97 percent white in 1965 (U.S., Bureau of the Census 1962*d*, table P-1; 1966*d*, table 2).

Yonkers illustrates a second pattern of change. This suburb attracted relatively many blacks, but among whites in-migration has been matched by out-migration. An area of older homes near the center of Yonkers has lost white and gained black population. In the northern extremities of this suburb, new construction has taken place, and the increase in white population in one area offsets a loss in another area. If no vacant land for new construction remains, the color composition of this suburb will change as more blacks move into older residential areas.

Other types of change, reflecting urban renewal activities, occurred within New Rochelle and White Plains. New Rochelle's population and racial composition remained stable after 1960. An urban renewal project was begun in New Rochelle which led to an out-migration of both blacks and whites sufficient in size to offset the effects of natural increase (U.S., Department of Housing and Urban Development 1967, p. 44).

Since 1960, the white population of White Plains decreased while its black population grew slowly. This suburb has many of the same characteristics as Mount Vernon and Yonkers, and one might expect its black population to increase rapidly. However, an urban renewal project was started which will raze the homes of 400 white and 400 Negro families (U.S., Department of Housing and Urban Development 1967, p. 44). This involves only about 3 percent of the white but 21 percent of the Negro population (U.S., Bureau of the Census 1961*e*, table 21). If the displaced black families relocate outside this suburb, the process of racial succession will be slowed.

Rockland County had a sparse population in 1960, so census tracts in this county included very extensive land areas. The black population in a number of tracts went up, but more detailed information is needed to ascertain which particular areas have attracted black residents.

THE CHARACTERISTICS OF SUBURBAN IN-MIGRANTS

Data from the special censuses conducted in the New York and Chicago suburban rings indicate there is a growing black suburban population and

suggest that young black families are moving into suburbia. However, the socioeconomic selectivity of these suburban in-migrants or the status of blacks in suburbia, compared to that of blacks in central cities, is not revealed by these special censuses.

Whites who live in suburbs, particularly suburbs near the large central cities, are typically better educated, hold more prestigious jobs, and have larger incomes than central city whites (Duncan and Reiss 1956, pp. 127–33; Schnore 1965, p. 245; U.S., Bureau of the Census 1963*a*, tables 3, 6*a* and 8). One of the reasons for this is the selectivity of migrants who move into suburbs. The Taeubers investigated metropolitan migration patterns for whites for the period 1955–60 and discovered that suburban rings attracted large streams of high-status migrants from their central cities. In addition, there was a sizable stream of intermetropolitan migrants, many of whom moved directly into suburbs when they came into a new area (Taeuber and Taeuber 1964*a*, pp. 718–29).

The most recent data showing the socioeconomic characteristics of suburban blacks pertain to 1960, and the latest period for which figures are available about the characteristics of migrants is 1955–60. To describe the Negro suburban population, the ten metropolitan areas whose suburban rings had the largest black populations in 1960 were selected. Table 3 summarizes some of the information which was examined. It shows, first, the total number of nonwhites, age five and over, in each area in 1960 by their place of residence in 1955. This indicates the size of migration streams. The table also shows the proportion of men in each migration category who held white collar or craftsman jobs, which allows us to study the characteristics of migrants and compare them to those of nonmigrants.

Central city blacks rather than suburban blacks had the higher socioeconomic status. Both in the South and in the North, men in the cities held proportionally more of the prestigious jobs than did men in suburbia. Only in Newark was there a reversal of this pattern. A comparison of differences in educational attainment (data not shown) revealed a similar finding. In each of these areas, save Newark, the proportion of blacks who were high school graduates was higher in the central city than in the suburban ring.

This finding—that unlike whites suburban blacks in 1960 were often lower in social status than those in the city—is further substantiated by the figures below which refer to all SMSAs which had populations of 250,000 or more in 1960 (U.S., Bureau of the Census 1963*a*, tables 3, 6a, and 8).

	Whites (%)		Nonwhites (%)	
	Cities	Suburban Rings	Cities	Suburban Rings
Proportion of adults with some college education	18	21	10	9
Proportion of families with incomes of $10,000 or more	19	23	6	7
Proportion of employed men with white-collar jobs	31	30	14	11

The causes of this unusual pattern of city-suburban differentiation are difficult to specify. In the South, suburban rings still contain some blacks who are farmers, and this tends to lower average socioeconomic status in southern suburban rings. Within the North it was thought that city-suburban differences in age composition might account for this finding. However, after age differences were taken into account by a standardization procedure, suburban blacks still did not match central city blacks in social status. (For further discussion, see Schnore 1965, pp. 242–52.)

TABLE 3

DISTRIBUTION OF NONWHITE POPULATION IN 1960 BY PLACE OF RESIDENCE IN 1955 AND PROPORTION OF EMPLOYED MALES WORKING AT WHITE COLLAR OR CRAFTSMEN JOBS*

	N (thousands)	White Collar, Crafts (%)	*N* (thousands)	White Collar, Crafts (%)	*N* (thousands)	White Collar, Crafts (%)	*N* (thousands)	White Collar, Crafts (%)	*N* (thousands)	White Collar, Crafts (%)
	New York		Philadelphia		Newark		Birmingham		Chicago	
Central city residents:*										
Total†	1,000	34	464	30	118	21	117	19	707	27
Residents, both 1955 and 1960	875	35	420	31	94	22	108	20	587	30
In-migrants from the suburban ring	5	35	4	44	4	23	3	17	6	32
In-migrants from other SMSAs	30	43	12	38	6	26	2	23	24	26
In-migrants from nonmetropolitan areas	29	29	11	21	8	17	4	15	31	22
Suburban ring residents:*										
Total	129	30	126	26	77	30	73	14	71	27
Residents, both 1955 and 1960	86	29	104	25	61	30	64	14	48	25
In-migrants from the central city	14	42	7	41	4	43	5	18	9	40
In-migrants from other SMSAs	8	33	6	33	5	45	1	26	4	37
In-migrants from nonmetropolitan areas	10	29	4	20	2	11	2	11	5	20
	Saint Louis		Detroit		Washington		Miami		Pittsburgh	
Central city residents:										
Total	183	23	418	26	362	36	56	16	89	23
Residents, both 1955 and 1960	163	24	375	26	304	37	42	17	81	24
In-migrants from the suburban ring	2	24	10	27	5	36	1	19	2	23
In-migrants from other SMSAs	3	35	11	41	15	47	3	18	2	34
In-migrants from nonmetropolitan areas	6	21	9	22	17	27	6	14	2	28
Suburban ring residents:										
Total	69	20	68	24	68	29	61	16	54	20
Residents, both 1955 and 1960	61	20	52	23	50	27	40	16	48	20
In-migrants from the central city	3	30	8	28	5	47	10	21	2	32
In-migrants from other SMSAs	2	30	3	38	3	48	3	25	2	47
In-migrants from nonmetropolitan areas	2	14	2	30	4	17	5	14	1	26

SOURCE.—U.S., Bureau of the Census 1963*b*, table 4.

* These figures refer to nonwhites. In each of the cities and suburban rings Negroes comprised between 93 and 99 percent of the nonwhite population.

† The total population exceeds the sum of the residents in the listed areas because it includes people who were abroad in 1955 and people who did not report their 1955 place of residence.

Metropolitan migration patterns among blacks are similar to those (whites, even though there are important differences in the volume (migration. In eight of the ten metropolitan areas for which data are pr sented in table 3, the largest stream of blacks moving into suburban rin were people leaving the central city. In each area except Birminghan these city-to-suburb movers were higher in socioeconomic status than eith the blacks who remained in the central city or the other blacks who lived i the suburban ring.

The suburbs attracted two other, but typically smaller, streams of m grants. Among Negroes, as among whites, there was a stream of high status intermetropolitan migrants who moved directly into the suburba ring between 1955 and 1960. (For further description of these higher statu intermetropolitan nonwhite migrants, see Taeuber and Taeuber 1965*b*, p 429–41.) There was also a stream of young migrants from nonmetropolita areas who were low in socioeconomic status. Many of these migrants ma have left southern rural areas or small towns for the economic opportuniti of large metropolitan areas.

Table 3 shows these central cities attracted two streams of migrant which were of approximately equal size. One stream came from other metro politan areas and was high in socioeconomic status. The second strean came from nonmetropolitan areas, and few of the men held white collar o craftsmen jobs. In addition, the central cities attracted migrants fron suburbia, and these ring-to-city movers were generally high in socio economic status. This is similar to the Taeubers's finding that, between 195 and 1960, cities and their suburbs exchanged relatively high-status whit population (Taeuber and Taeuber 1964*a*). Unlike the situation for whites however, among Negroes the number of city-to-ring movers did not alway greatly exceed the number of ring-to-city movers. In some areas, New Yor and Miami, for instance, the number moving from the city to the ring ex ceeded the number moving in the other direction, but in other areas, such a Detroit, Michigan, ring-to-city movers were more numerous.

The data presented in this paper clearly indicate that between 1955 an 1960 suburban rings attracted higher status black residents from their cen tral cities and also attracted a sizable share of the higher status inter metropolitan migrants. The growth of the Negro suburban population ha increased since 1960, and the migrants to suburbia during this decade ar probably of higher status as were the migrants during the last decade. Thi migration may already be of sufficient size to establish a pattern of city suburban socioeconomic differences among blacks, similar to that observe among whites. For instance, in 1959 median family income among blacks in the suburban rings was far below that of blacks in central cities, but by 1967 it was higher in the suburban rings (U.S., Bureau of the Census 1969*a*, p. 37). Among young adult blacks, educational attainment levels in 1960 were lower in the suburban rings than in the cities, but by 1968 this was reversed, probably reflecting the migration to the suburbs of well-educated young Negroes (U.S., Bureau of the Census 1969*a*, p. 23). It is likely that the

Census of 1970 will find that suburban blacks are higher in socioeconomic status than those in central cities.

THE PROCESS OF SUBURBANIZATION

The demographic data indicate that suburban rings are attracting black migrants and that, while all economic levels are represented, the migrants to suburbia tend to be higher in socioeconomic status. It appears that three types of suburban areas have gained black population. First, particularly in the North, there are older, densely settled suburbs often containing or near employment centers. Such places as Maywood, Yonkers, and East Cleveland, Ohio, have experienced population replacement—that is, decreases in white population but growth of black—and in the future more suburbs will undergo similar change. Studies of residential change have found that the first Negroes to move into a white neighborhood are those who are financially able to purchase better housing than that which is generally available to blacks (Taeuber and Taeuber 1965*a*, pp. 154–66; Duncan and Duncan 1957, pp. 215–36). Such older suburbs contain housing units which are better than those blacks can occupy in the ghettoes. On the other hand, because of the age of the homes and the small lots on which they were built, homes in these suburbs may not appeal to whites who move out from the central city. The causes of racial change in any particular older suburb may be idiosyncratic, but proximity to employment is probably an important factor.

The second type of area with growing black population is the new suburban development. Some are built exclusively for Negroes. Richmond Heights, Florida, which was described previously, is one example; in recent years Hollydale has been built near Cincinnati (Rose 1965, p. 380), and new homes have gone up in Inkster, a Detroit suburb with a large black population (U.S., Bureau of the Census 1966*c*, table B-6). In addition, it is possible that a small number of blacks are moving into new and integrated suburban developments.

A third type of area with a growing Negro population is to be found in the suburban rings of many large cities. Areas lacking adequate sewer and water facilities, containing dilapidated homes of low value, and having exclusively black populations could be located in 1960 in suburban areas. They have grown partly because of natural increase, partly because some public housing has been erected (between 1959 and 1966, seventy-five public housing units were authorized in Robbins, 216 in East Chicago Heights and 150 in Kinloch [U.S., Bureau of the Census 1966*c*, table B-7; 1968*d* table 8]), and partly because low-income blacks may find inexpensive housing close to their jobs in these suburbs.

Expansion of the black suburban population will depend upon many factors; three of the most important are discussed here. First is the rate at which the economic status of blacks improves. In recent years the income of Negroes has gone up much faster than have prices. For instance, median family income of blacks increased about 6 percent each year from 1960 to

1967 while the cost of living went up by less than 2 percent annually (U.S., Bureau of the Census 1967*d*, table G; 1968*e*, table 3; 1968*g*, table 505). Negroes now have more money to spend for shelter and consumer goods. The migration of blacks to suburbia reflects such economic gains, and if incomes continue to go up more rapidly than the cost of living, more blacks will be able to afford better housing.

The second factor is the rate at which new housing is constructed and the housing policies which will be favored by the federal government. At present, a little over 1.5 million housing units are built annually (U.S., Bureau of the Census 1969*f*, table 1). The President's Committee on Urban Housing estimated that 2.7 million new housing units were needed each year to provide for the growing population and to replace substandard housing (U.S., President's Committee on Urban Housing 1967, p. 7). The Kerner Commission Report recommended numerous programs to encourage building new homes for low- and moderate-income families outside central city ghettoes (U.S., National Advisory Commission on Civil Disorders 1968, pp. 467–82). If there is a great volume of new construction, and if clusters of low and moderately priced homes are spread throughout suburbia and are open to Negro occupancy, there may be a rise in the black suburban population.

The third factor is the rapidity with which suburban housing becomes available to blacks. Since 1960 the incomes of Negroes have increased more rapidly than those of whites (U.S., Bureau of the Census 1968*f*, p. 6). If this continues, more Negroes will be able to compete with whites for suburban housing. Perhaps when the federal open occupancy law becomes fully effective, discrimination will be reduced, and more suburbs will include blacks in their population. This is an optimistic view. Racial policies in the new suburb of Levittown, New Jersey, were described by Gans (1967, pp. 22, 371–78). Despite a state open occupancy law, the developers announced plans to sell only to whites and turned away black customers. Negroes were eventually accepted after a suit proceeded through the courts for two years. Even after this, special policies were instituted to screen Negro buyers and place them in isolated areas. If this is duplicated in other suburbs, blacks who desire to move into the suburbs will still face immense difficulties regardless of their financial means.

THE CONSEQUENCES OF SUBURBANIZATION

The suburbanization of blacks does not herald a basic change in the patterns of racial segregation within metropolitan areas. Cities and their suburban rings are becoming more dissimilar in racial composition, and the out-migration of some blacks from the city will not alter this process. It will do no more than slow the growth of the black population of some cities while adding still greater diversity to the already heterogeneous population of suburbia.

It does indicate that Negroes, similar to European ethnic groups, are becoming more decentralized throughout the metropolitan area after they

ave been in the city for some time and improved their economic status (Cressey 1938, pp. 59–69; Taeuber and Taeuber 1966, pp. 130–36; Schnore 1965, pp. 126–33). However, improvements in economic status brought bout not only the residential decentralization of European immigrant roups but also reductions in their residential segregation (Lieberson 1963, haps. 3 and 4). Negroes have deviated widely from this pattern for, despite conomic gains and some decentralization of predominately black residenial areas, the residential segregation of Negroes has persisted (Taeuber and Taeuber 1964*b*, pp. 374–82). Even during the prosperous period from the nd of World War II to the present, there is no evidence that the residential egregation of blacks decreased (Taeuber and Taeuber 1965*a*, chap. 3; Clemence 1967, pp. 562–68; Farley and Taeuber 1968, p. 983). It is possible hat the suburbanization of blacks will alter this pattern, and a future cenus may reveal integrated suburban neighborhoods. In the meantime, we an be certain that the residential segregation patterns of central cities are eappearing within the suburbs.

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Foreign Affairs and Party Choice[1]

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Two models dealing with foreign affairs as a source of political cleavage in industrial democracies are compared. Attitudes toward the Cold War are investigated in West Germany, Britain, France, Japan, and Italy. For each nation, it is determined whether individuals with differing attitudes toward the Cold War usually prefer different political parties (i.e., express cleavage in party choice), and whether followers of the different parties usually have different attitudes regarding the Cold War (i.e., cleavage between parties). Cleavage is found in nations where issues of social class are still a source of sharp political party conflict. Differences of opinion regarding the Cold War often reflect and reinforce political conflict based on issues of social class.

Foreign policy issues have been said to be both a source of domestic political cleavage and a source of consensus in industrial democracies. The "middle majority" model, best represented in the work of Lipset (1960, 1964), does not view foreign policy issues as a source of political cleavage. Furthermore, this model states that social structural factors cause both increased political consensus and a decline of issues of social class conflict (Lipset 1964; Lane 1965; Alford 1963). This decline of class-based issues is often called "the end of ideology" (Lipset 1960, chap. 13; Bell 1960; Dahrendorf 1959; Shils 1955). On the other hand, the "consensus and cleavage" model, while recognizing the decline of class-oriented politics in the developed democracies, also postulates that new sources of cleavage may arise to supplement or replace issues of social class (Janowitz and Segal 1967). More particularly, this approach recognizes that attitudes toward issues of foreign affairs may be a basis for political cleavage.

TWO MODELS OF POLITICS

According to Lipset, increased economic productivity brings a higher standard of living and distributes affluence more equitably. The level of education rises, status gaps diminish, and a larger proportion of the population comes to belong to the middle stratum. Such conditions moderate class conflict. Also operating to decrease class conflict is the extension of the rights of citizenship to most members of society. Finally, political controversy based on conflicting class ideologies is reduced by a spreading

[1] This paper was presented at the 1969 annual meeting of the American Sociological Association. I would like to thank Morris Janowitz for his intellectual encouragement and support; Dr. Leo Crespi, of the United States Information Agency, for helping me obtain the survey data upon which this paper is based; and Donald Cressey for his invaluable suggestions regarding revision of this paper.

ɛptance of science and professionalism. Issues that were formerly the ;is of class conflict are resolved by invocation of nonpartisan professional l scientific norms. In this view, "social classes in the sense of great dif- e blocs of people in generalized conflict may no longer exist" (Alford ;3, p. 337). Nevertheless, a person's social class still remains the best ;dictor of his political party preference because "social class in the sense groups in similar objective situations organizing to pursue collective erests remain powerful political forces" (Alford 1963, p. 337).

This middle majority model also depicts foreign affairs issues ("the pact of wars both hot and cold") as only short-run conditions facilitating tional consensus and a decline of class-based issues (Lipset 1964, p. 3). For example, Lipset implies that the Cold War and World War II ated an atmosphere which encouraged putting aside class issues in favor national unity. In the first place, governmental intervention in the nomy during World War II legitimated measures formerly considered ocialistic." In the second place, these measures encouraged economic wth which, in turn, moderated class conflict through the processes just scribed.

Lipset seems to imply that foreign affairs issues are rarely a source of ntention between parties, and, therefore, are an insignificant source of avage. He predicts, in a sense, that individual attitudes toward foreign airs will not determine party choice and that followers of the different litical parties will not have distinctively different attitudes on foreign airs issues. Lipset (1964, pp. 287–93) notes one exception, however. He nts out that Communist parties have resisted the trend toward con- isus regarding the issues of social class. This might be taken to mean that mmunist party policy regarding foreign affairs will not be consensual, d that followers of Communist parties will have distinctive attitudes garding foreign affairs.[2]

In contrast to the middle majority model, the model of consensus and avage considers politics in industrial democracies as much more than a line of social class issues and a rise of consensus (Janowitz and Segal 67). Although this model acknowledges the decreasing saliency of the ues of class and a lessening adherence to the total ideologies of class nflict, it also postulates that new sources of cleavage may arise to supple- nt and supplant class. As Janowitz and Segal (1967, p. 602) have said, he 'consensus and cleavage' approach postulates a more complicated ttern of social stratification, in which political conflict is manifested by w and more differentiated social groupings which reflect economic, pro- sional and bureaucratic interests. Likewise, religious, ethnic, and lin-

ı recent work, Lipset seems to be moving away from the unicausal social class de- minism implicit in his middle majority model. In the past he has used a "nondogmatic rxist approach," but recently he used a Parsonian framework to generate a model ich explains European political party systems (Lipset and Rokkan 1967). In this recent k, Lipset also acknowledges that "disagreements with the national powers-that-be r foreign and military policy" are one of several factors which may affect the "processes ocialization and recruitment" of young people into the established political parties pset and Rokkan 1967, pp. 54–55).

guistic differences can persist or emerge as bases of political cleavage which include ideological elements."

In the area of foreign affairs, the model of consensus and cleavage, like Lipset's model, views the Cold War as making "possible the management of the national economy so as to inhibit political conflict and . . . 'create' a situationally based consensus" (Janowitz and Segal 1967, p. 617). However, this model also postulates that the structure of international affairs may be a source of domestic political cleavage: "We prefer at a minimum to see mass perceptions of the threat of war and international tensions as a relevant and emerging basis for political cleavage" (Janowitz and Segal 1967, p. 617). In short, the consensus and cleavage model recognizes foreign affairs as a basis for political cleavage, while the middle majority model implies only that Communists may have different foreign affairs attitudes than followers of other parties.

PARTY CHOICE AND THE COLD WAR

Survey data regarding the relationship between attitudes toward the Cold War and party choice should furnish evidence bearing upon both models of politics.[3] Two important questions relevant to the validity of each of the models can be formulated about these survey data. First, do those holding opposing views on basic issues of foreign policy (the Cold War) usually support different types of political parties, thereby expressing cleavage in party choice?[4] Stated in different terms, are individual attitudes toward the Cold War predictive of political party preference?[5] Second, do

[3] The data were collected in early 1964 in West Germany, Britain, France, Japan, and Italy as part of the USIA's World Survey II. The surveys were carried out in each of the five nations by means of random probability samples. The German survey was executed by the Deutsches Institut für Volksumfragen, the British survey by Social Surveys, Ltd., the French survey by Institut Français d'Opinion Publique, the Japanese survey by Central Research Services, Inc., and the Italian survey by Società Internazionale per le Ricerche di Mercato. Except for some variations in the Japanese survey, the same questions were asked in each country. (For further information, see Willick 1969.)

[4] Attitudes toward the Cold War were determined by two questions: (1) "In the present world situation do you personally think that on the whole, (name of respondent's nation) should side with the United States, Russia, or with neither?" (2) "All things considered, how much danger do you think there is of a Russian attack upon Western Europe within the next four years—a great deal of danger, some danger, only a little danger, or none at all?" (In Japan this question was asked regarding the danger of a Chinese Communist attack on an Asian country.)

In every nation except Italy, party preference was determined by the question. "Which political party do you think is best for people like yourself?" For Italy, party preference was synthesized from the above question, a question about whether respondents had voted for the party which "is best for people like yourself" in the April 1963 election, and by a question asking which party the respondents currently preferred.

[5] Predictive ability was measured by lambda (asymmetric) (Goodman and Kruskal 1954). Lambda (asymmetric) is greater than zero when there is cleavage (i.e., usual disagreement between members of different groups). Lambda is a weighted measure, in the sense that it takes into account the relative sizes of the disagreeing groups. It represents the number in each group where the usual response is different from the usual response for the entire sample who would have to change their attitudes for the group's

those persons supporting different political parties usually have opposing views on Cold War issues, thereby revealing cleavage between parties? In other words, is party preference predictive of attitudes toward the Cold War?

While it is not meant to imply that relationships between mass political attitudes and party preference are the only relevant measures of political consensus and cleavage, the measures suggest that for each nation there are four possible situations of consensus and cleavage (see table 1).

TABLE 1

PUBLIC ATTITUDES AND POLITICAL PARTY PREFERENCE

	Cleavage Expressed in Party Choice*	
	Yes	No
Cleavage between parties:†		
Yes	1	2
No	3	4

NOTE.—1 = cleavage expressed in both party choice and in cleavage between parties; 2 = cleavage between parties, but no cleavage expressed in party choice; 3 = cleavage expressed in party choice, but no cleavage between parties; 4 = no cleavage (consensus).

* Individual attitudes regarding the Cold War are predictive of individual party preference.

† Individual party preference is predictive of individual attitudes regarding the Cold War.

As in many studies of political sociology, the term "cleavage" refers to a usual disagreement between the members of two or more groups. For example, cleavage exists when the followers of one political party usually think their nation should side with the United States in the Cold War, while the followers of another political party usually feel that their nation should be neutral. On the other hand, consensus exists when it is usual for members of two or more groups to agree on a matter such as the relationship of their nation to the United States in the Cold War. Such definitions of consensus and cleavage avoid the important problem of determining if members of one group accurately perceive the opinions of others of their own group or another group. Unfortunately, the data do not allow the use of such an elaborated model of consensus and cleavage.[6]

CLEAVAGE EXPRESSED IN PARTY CHOICE

In order to compute the level of association between political party preference and other variables, it was necessary to exclude from the tabula-

usual response to be the same as the usual sample response divided by the number in the entire sample who do not give the usual sample response.

[6] Scheff (1967) considers many of the aspects of such a model.

tions respondents who refused to answer the questions on the Cold Wa or their political party preference, and those who stated they had no polit cal preference. Also omitted were a few individuals who preferred partie other than those specified by the precoded surveys. Of the individuals thu excluded from the computations, some are probably genuinely apatheti to politics; some are truly independent in their voting, basing their suppor on issues and personalities rather than party; and some probably are su

TABLE 2

PARTY PREFERENCE AND PREFERRED ALLY IN COLD WAR (WEST GERMANY)*

Party Preference	U.S.	Neither	USSR
CDU/CSU..........	53.0 (308)	44.4 (56)	...
FDP................	7.4 (43)	5.6 (7)	...
SPD................	39.6 (230)	50.0 (63)	100 0 (2)
Total.............	100.0 (581)	100.0 (126)	100 0 (2)

NOTE.—Total units missing = 493: no response, party preference = 153, no response, preferred ally = 69, no response, party preference and preferred ally = 61, party preference other than CDU/CSU, FDP, or SPD = 15, no party preference = 162, no response, preferred ally and other party preference = 2, no response, preferred ally and no party preference = 31.

* Lambda (asymmetric) = .026.

TABLE 3

PARTY PREFERENCE AND PREFERRED ALLY IN COLD WAR (GREAT BRITAIN)*

Party Preference	U.S.	Neither	USSR
Conservative.........	46 5 (225)	30 2 (100)	18 8 (3)
Liberal	11.0 (53)	12 1 (40)	6 2 (1)
Labor...............	42.6 (206)	57 7 (191)	75 0 (12)
Total.............	100 1 (484)	100.0 (331)	100.0 (16)

NOTE.—Total units missing = 217: no response, party preference = 122, no response, preferred ally = 62, no response, both party preference and preferred ally = 26, party preference other than Conservative, Liberal, or Labor = 7.

* Lambda (asymmetric) = .045.

porters of extreme parties (e.g., Communist party) or hold extreme posi tions regarding the Cold War (e.g., support of Russia in the Cold War) and are unwilling to admit their preferences. The exclusion of those wh are politically apathetic is not especially damaging, because such peopl are not likely to participate in the political process, even to the extent o voting. Unfortunately, the exclusion of independents, adherents to extremis parties or extreme positions regarding the Cold War, and the few wh prefer "other" parties renders the results incomplete.

With this reservation, it may be concluded from tables 2-6 that in eac nation, those who think their nation should side with the United State "in the present world situation" are less likely to support left parties tha

TABLE 4

Party Preference and Preferred Ally in Cold War (France)*

Party Preference	U.S.	Neither	USSR
Right	49.1 (111)	37.9 (163)	19 5 (8)
Center	22.1 (50)	18.4 (79)	9.8 (4)
Left	28.8 (65)	43.7 (188)	70.7 (29)
Total	100 0 (226)	100.0 (430)	100.0 (41)

Note.—Total units missing = 518: no response, party preference = 381, no response, preferred ally = 64, no response, both party preference and preferred ally = 65, party preference other than left, right, or center = 7, no response, preferred ally and other party preference = 1.

* Lambda (asymmetric) = .111.

TABLE 5

Party Preference and Preferred Ally in Cold War (Japan)*

Party Preference	U.S.	Neither	USSR
Liberal-Democratic	67.9 (161)	47.7 (72)	16 7 (1)
Democratic-Socialist	6.3 (15)	6.0 (9)	33.3 (2)
Socialist	25 7 (61)	46.4 (70)	50 0 (3)
Total	99 9 (237)	100.1 (151)	100 0 (6)

Note.—Total units missing = 409: no response, party preference = 39, no response, preferred ally = 155, no response, both party preference and preferred ally = 55, party preference other than Liberal-Democratic, Democratic-Socialist, or Socialist = 9, other party preference and no response preferred ally = 2, no party preference = 81, no party preference and no response preferred ally = 68.

* Lambda (asymmetric) = .012.

TABLE 6

Party Preference and Preferred Ally in Cold War (Italy)*

Party Preference	U.S.	Neither	USSR
Right	14.4 (72)	6 4 (17)	...
Center	58.9 (295)	22.8 (61)	...
Left	26.7 (134)	70 8 (189)	100.0 (16)
Total	100.0 (501)	100.0 (267)	100 0 (16)

Note.—Total units missing = 391: no response, party preference = 202, no response, preferred ally = 154, no response, both party preference and preferred ally = 35.

* Lambda (asymmetric) = .336.

those who think their nation should be neutral or side with the Sov Union.[7] Similarly, those who feel there is little or no danger of a Russi attack on Western Europe are more likely to prefer left parties than th who feel there is a great deal of danger or some danger of such an atta However, as tables 7–11 show, this relationship is clear-cut only in W

TABLE 7

PARTY PREFERENCE AND DANGER OF COMMUNIST ATTACK (WEST GERMANY)*

PARTY PREFERENCE	DANGER OF SOVIET ATTACK ON WESTERN EUROPE			
	Great Deal	Some	A Little	None
CDU/CSU	57.9 (22)	57.1 (96)	47.1 (122)	49.0 (
FDP	5.3 (2)	7.1 (12)	7.3 (19)	4 8
SPD	36.8 (14)	35.7 (60)	45.6 (118)	46.2 (
Total	100.0 (38)	99.9 (168)	100.0 (259)	100 0 (1

NOTE.—Total units missing = 592: no response, party preference = 125, no response, danger attack = 168, no response, party preference and danger of attack = 89, party preference other t CDU/CSU, FDP, or SPD = 14, no party preference = 141, no response, danger of attack and other pa preference = 3, no response, danger of attack and no party preference = 52.

* Lambda (asymmetric) = 0.

TABLE 8

PARTY PREFERENCE AND DANGER OF COMMUNIST ATTACK (GREAT BRITAIN)*

PARTY PREFERENCE	DANGER OF SOVIET ATTACK ON WESTERN EUROPE			
	Great Deal	Some	A Little	None
Conservative	37.5 (12)	38.1 (56)	41.3 (102)	41 2 (1
Liberal	6.2 (2)	10.2 (15)	15.0 (37)	11.6 (
Labor	56.2 (18)	51.7 (76)	43.7 (108)	47 3 (1
Total	99.9 (32)	100 0 (147)	100.0 (247)	100.1 (3

NOTE.—Total units missing = 311: no response, party preference = 108, no response, danger of att = 156, no response, both party preference and danger of attack = 40, party preference other than C servative Liberal, or Labor = 6; no response, danger of attack and other party preference = 1.

* Lambda (asymmetric) = 0.

[7] For the purposes of comparability, the multiparty systems of France and Italy a typified in terms of the usual left, center, and right categories used to indicate relat party position regarding the redistribution of wealth to benefit the lower classes. Th in France, right = Gaullists (UNR/UDT) and Indépendants; center = MRP a Radicaux; and left = Communists and Socialists (SFIO), and in Italy, right = Libera Monarchists, Neofascists, and Rightists; center = Christian Democrats, Centrists, a Center Leftists; left = Republicans, Social Democrats, Leftists, Left Socialists, a Communists.

Since the other three nations each have three main parties which also represent a le center, and right split, a finding of cleavage between parties will indicate that followers parties with different policies regarding social class issues disagree regarding the C War. Similarly, cleavage expressed in party choice will indicate that those who disag regarding the Cold War affiliate with parties which take opposing stands on social cl issues.

TABLE 9

PARTY PREFERENCE AND DANGER OF COMMUNIST ATTACK (FRANCE)*

Party Preference	Danger of Soviet Attack on Western Europe			
	Great Deal	Some	A Little	None
Right	61.9 (13)	44.0 (63)	48.1 (63)	33.0 (123)
Center	9.5 (2)	23.1 (33)	22.1 (29)	15.8 (59)
Left	28.6 (6)	32.9 (47)	29.8 (39)	51.2 (191)
Total	100.0 (21)	100.0 (143)	100.0 (131)	100.0 (373)

NOTE.—Total units missing = 547: no response, party preference = 318, no response, danger of attack = 93, no response, both party preference and danger of attack = 128, party preference other than left, right, or center = 8.

* Lambda (asymmetric) = .122.

TABLE 10

PARTY PREFERENCE AND DANGER OF COMMUNIST ATTACK (JAPAN)*

Party Preference	Danger of Communist Chinese Attack in Asia			
	Great Deal	Some	A Little	None
Liberal-Democratic	41.7 (5)	63.4 (59)	56.2 (36)	55.9 (38)
Democratic-Socialist	16.7 (2)	5.4 (5)	6.2 (4)	5.9 (4)
Socialist	41.7 (5)	31.2 (29)	37.5 (24)	38.2 (26)
Total	100.1 (12)	100.0 (93)	99.9 (64)	100.0 (68)

NOTE.—Total units missing = 566: no response, party preference = 16, no response, danger of attack = 312, no response, both party preference and danger of attack = 78, party preference other than Liberal-Democratic, Democratic-Socialist, or Socialist = 4, other party preference and no response danger of attack = 7, no party preference = 32, no party preference and no response, danger of attack = 117.

* Lambda (asymmetric) = 0.

TABLE 11

PARTY PREFERENCE AND DANGER OF COMMUNIST ATTACK (ITALY)*

Party Preference	Danger of Soviet Attack on Western Europe			
	Great Deal	Some	A Little	None
Right	11.1 (11)	16.8 (29)	16.8 (26)	6.6 (18)
Center	66.7 (66)	54.3 (94)	34.8 (54)	28.7 (78)
Left	22.2 (22)	28.9 (50)	48.4 (75)	64.7 (176)
Total	100.0 (99)	100.0 (173)	100.0 (155)	100.0 (272)

NOTE.—Total units missing = 476: no response, party preference = 176, no response, danger of attack = 239, no response, both party preference and danger of attack = 61.

* Lambda (asymmetric) = .234.

Germany and Italy. In France, the contrast is between those who feel there is no danger of a Soviet attack and all others. Those who feel there is no danger are more likely to prefer the left parties. In Japan, there is no clear pattern in the party preferences of those who perceive varying levels of danger of a Chinese Communist attack.[8] Finally, in Britain the norm is reversed. Those who feel there is a great deal of or some danger are more likely to prefer the Labor party than those who feel there is little or no danger.

A great amount of cleavage, as indicated by lambda (asymmetric), exists in France and Italy. (The larger the value of lambda, the more predictive foreign affairs attitudes are of party choice.) On the question of siding with the United States, Russia, or neither country, there is some cleavage in each nation; it is greatest in Italy and France. On the question of the danger of a Communist attack, there is cleavage only in Italy and France. These findings, showing some minor cleavage regarding which country to side with in the Cold War in West Germany, Britain, and Japan and showing major cleavage regarding whom to side with and regarding the danger of a Communist attack in France and Italy, appear to be partial evidence against the middle majority model.

As indicated, the middle majority model suggests that the Cold War is a short-run factor which facilitates the lessening of conflict based on issues of social class conflict. It appears, however, that the Cold War has served significantly to supplement political conflict between right, center, and left, at least in Italy and France. This is probably more the case in Italy than in France.[9]

In France and Italy, much political party conflict is still organized around the rhetoric of class conflict. Both nations have large Communist parties which keep the rhetoric alive. Lipset recognizes the resistance of these Communist parties to the "end of ideology." He points out that the French Communist party still adheres to an orthodox Marxist doctrine, while the Italian Communist party has moderated its views (Lipset 1964, pp. 353–59). However, LaPalombara (1966, p. 11) argues that the Italian Communist party is still "a long way from abandoning such key concepts as class, dialectical conflict, the exploitative nature of monopoly capitalism, and the need for effecting structural—not mild reformist changes in the social system." The Socialist party (as of early 1964) was a further influence for party conflict over issues of social class in Italy. As Barnes (1966, p. 348) has said, "The PSI is probably the only democratic Socialist party of the classical Marxist type left in Western Europe. . . ." As shown above, the Cold War is a major source of cleavage expressed in party choice in both Italy and France. On the other hand, in West Germany and Britain, issues of class conflict are not a major source of political party conflict and

[8] The high level of Japanese fear of a Chinese Communist attack in Asia is not unreasonable, because of the then recent Chinese attack on India.

[9] One commentator (Kogan 1963, p. 136) contends that domestic-class concerns determine Italian foreign policy: "The key objective of Italian foreign policy is to protect the domestic social structure from internal dangers."

e Cold War is not a major source of cleavage expressed in party choice. has been pointed out by scholars that in Britain the major parties only ve moderate differences and work "in tandem" (Potter 1966, p. 29). recent years the same trend has been apparent in West Germany irchheimer 1966, pp. 243–45). Finally, in Japan, one finds a major party ing the rhetoric of class conflict (Stockwin 1966), but only minor cleavage pressed in party choice over the Cold War. (However, below it will be en that there is cleavage between parties over the Cold War in Japan.)

It is important to note that the distinction being made between Britain d West Germany, on the one hand, and Italy, France, and Japan, on e other, is in terms of the political rhetoric which typifies party conflict. ie distinction being drawn implies nothing about the social structural ses of party support. For instance, in Britain, one finds that social class s measured by the occupation of the head of the household) is highly edictive of party preference, yet there is also a low level of the use of the etoric of class conflict usually associated with ideological politics. Conistingly in Italy, the best single predictor of party preference is someing other than an individual's social class. (Tabulations from World irvey II show that the sex of respondents is the best single predictor in aly, probably because of female traditionalism and religiosity.[10]) Nevereless, one also finds a relatively heavy emphasis on the rhetoric of class nflict in Italian politics, probably because of the presence of a large ommunist party.

One could argue that the above findings do not necessarily refute the iddle majority model. After all, West Germany, Britain, and Japan ow only slight cleavage, and both France and Italy have large Communist rties, which the model recognizes as an impediment to greater consensus. though the model does not explicitly mention that Communists seek to courage proneutralist and pro-Soviet sentiments and try to attract neualists into their party, one could argue that the model implies this. It ows from the logic of such a position that the cleavages based on Cold War titudes would be eliminated, if those who prefer the Communist party are moved from the analysis. As seen in tables 12 and 13, this is so in the case France. Individual attitudes regarding whom France should side with the current world situation, and the danger of a Russian attack on Westn Europe are not predictive of party choice. In Italy, however, individual titudes regarding whom Italy should side with are still predictive of rty preference. Also, attitudes regarding the danger of a Russian attack main slightly predictive of party choice. This indication, that Cold War titudes are a basis of cleavage in Italy (even with Communists excluded om the tabulations), casts doubt on any conclusion that the middle

The best single predictor was defined by comparing zero-order measures of association tween party preference and selected social characteristics. Lambda (asymmetric) was ed to compare the power of various variables to predict party choice (left, center, ght). Zero-order association between political party preference (Italy) and (1) occupan of head of household (manual or nonmanual) = .020, (2) education (three categories) 0, (3) union membership (yes or no) = .014, (4) social class status as estimated by terviewer (four categories) = .026, (5) sex = .091.

TABLE 12

Party Preference (Non-Communists) and Preferred Ally in Cold War

A. France*

Party Preference	France Should Side with: U.S.	Neither	USSR
Right	52.1 (111)	45.0 (163)	40.0 (8)
Center	23.5 (50)	21.8 (79)	20.0 (4)
Non-Communist left (SFIO)	24.4 (52)	33.1 (120)	40.0 (8)
Total	100.0 (213)	99.9 (362)	100.0 (20)

B. Italy†

Party Preference	Italy Should Side with: U.S.	Neither	USSR
Right	14.9 (72)	10.1 (17)	...
Center	61.1 (295)	36.3 (61)	...
Non-Communist left	24.0 (116)	53.6 (90)	100.0 (1)
Total	100.0 (483)	100.0 (168)	100.0 (1)

* Lambda (asymmetric) = 0.

† Lambda (asymmetric) = .101.

TABLE 13

Party Preference (Non-Communists) and Danger of Soviet Attack

A. France*

Party Preference	Danger of Soviet Attack on Western Europe: Great Deal	Some	A Little	None
Right	68.4 (13)	47.7 (63)	50.8 (63)	42 8 (123)
Center	10.5 (2)	25.0 (33)	23.4 (29)	20 6 (59)
Non-Communist left (SFIO)	21.0 (4)	27.3 (36)	25.8 (32)	36 6 (105)
Total	99.9 (19)	100.0 (132)	100.0 (124)	100.0 (287)

B. Italy†

Party Preference	Danger of Soviet Attack on Western Europe: Great Deal	Some	A Little	None
Right	11.8 (11)	18.0 (29)	19.5 (26)	9.9 (18)
Center	71.0 (66)	58.4 (94)	40.6 (54)	43 1 (78)
Non-Communist left	17.2 (16)	23.6 (38)	39.8 (53)	47 0 (85)
Total	100.0 (93)	100.0 (161)	99.9 (133)	100.0 (181)

* Lambda (asymmetric) = 0.

† Lambda (asymmetric) = .025.

majority model has universal applicability to the developed democracies. Furthermore, to the extent that the Cold War does not lead to consensus in each of the five nations, doubt is cast on the consensus and cleavage model. However, the more general prediction of the latter model that foreign affairs issues may produce political cleavage is confirmed by the findings.

CLEAVAGE BETWEEN PARTIES

Past research (Davis and Verba 1960; Aubert, Fisher, and Rokkan 1954; Belknap and Campbell 1951–52; Campbell, Gurin, and Miller 1954, pp. 118 ff.) in several of the developed democracies shows that there have been genuine differences in attitudes regarding foreign policy between the followers of different political parties. However, the party differences that existed often were found to be small.[11]

Distinct differences emerge when followers of different parties are compared with reference to responses to the two questions about the Cold War. Table 14 shows that in each nation, followers of the left-wing party or parties are more likely than others to be neutralist. As seen in table 15, except for British Laborites, the followers of left parties are also more likely than others to feel there is little or no danger of a Communist attack. In three instances, party differences are large enough to suggest that the followers of different parties take different sides on Cold War issues (i.e., that there is cleavage between parties). In Japan, over half of the Socialists are neutralist, while over half of the Liberal-Democrats and over half of the Democratic-Socialists are pro-American. Similarly, in Italy over half of the leftists are neutralist, while others are usually pro-American. The only other case of cleavage between parties is in Italy, where most leftists feel there is no danger of a Russian attack, while those preferring other parties usually believe there is such a danger.

The data suggest then, that cleavage between parties over Cold War issues exists in Japan and Italy, but not in West Germany, Britain, or France. These cleavages in the attitudes of party followers generally reflect differences in party policy. In Italy, both the Communist Party and, to a lesser extent, the Socialist Party were in favor of an anti-American stance in the Cold War, while all other major parties favored a pro-American position. (In early 1964, a left-wing faction split off from the Italian Socialist party, forming a new party in protest over the Socialist party's drift away from orthodox Marxism. Part of this drift was a qualified endorsement of the Western alliance.) In Japan, the Socialist party was in favor of Japanese neutrality in the Cold War and the Liberal-Democratic party favored supporting the United States, while the Democratic-So-

[11] Some of the variability in party differences over foreign affairs is indicated by comparing American data from 1952 (Campbell et al. 1954, pp. 118 ff.), when followers of the two major parties were very different in their attitudes regarding foreign affairs, with data from 1956 (Campbell et al. 1960, pp. 198 ff.), when there was little or no difference between party followers regarding foreign affairs.

TABLE 14

Preferred Ally in Cold War and Party Preference

A. West Germany*

West Germany Should Side with	Party Preference		
	CDU/CSU	FDP	SPD
U.S.	84.6 (308)	86.0 (43)	78.0 (230)
Neither	15.4 (56)	14.0 (7)	21.4 (63)
USSR	...	...	0.7 (2)
Total	100.0 (364)	100.0 (50)	100.1 (295)

B. Great Britain*

Great Britain Should Side with	Party Preference		
	Conservative	Liberal	Labor
U.S.	68.6 (225)	56.4 (53)	50.4 (206)
Neither	30.5 (100)	42.6 (40)	46.7 (191)
USSR	0.9 (3)	1.1 (1)	2.9 (12)
Total	100.0 (328)	100.1 (94)	100.0 (409)

C. France*

France Should Side with	Party Preference		
	Right	Center	Left
U.S.	39 4 (111)	37 6 (50)	23 0 (65)
Neither	57.8 (163)	59.4 (79)	66.7 (188)
USSR	2 8 (8)	3 0 (4)	10.3 (29)
Total	100 0 (282)	100.0 (133)	100 0 (282)

D. Japan†

Japan Should Side with	Party Preference		
	Liberal-Democratic	Democratic-Socialist	Socialist
U.S.	68.8 (161)	57.7 (15)	45 5 (61)
Neither	30.8 (72)	34.6 (9)	52 2 (70)
USSR	0 4 (1)	7.7 (2)	2 2 (3)
Total	100.0 (234)	100 0 (26)	99 9 (134)

* Lambda (asymmetric) = 0.

† Lambda (asymmetric) = .057.

TABLE 14—*Continued*

E. ITALY‡

ITALY SHOULD SIDE WITH	PARTY PREFERENCE		
	Right	Center	Left
U.S.	80.9 (72)	82.9 (295)	39.5 (134)
Neither	19.1 (17)	17.1 (61)	55.8 (189)
USSR	...	...	4.7 (16)
Total	100.0 (89)	100.0 (356)	100.0 (339)

‡ Lambda (asymmetric) = .194.

cialists favored supporting the United States with an eye to eventual Japanese neutrality. In 1959, the Democratic-Socialist party split off from the Socialist party. Behind the split was Democratic-Socialist opposition to the Socialist stand calling for an immediate abrogation of the Japanese-American Security Treaty (Mendel 1961, pp. 16–17). In Britain and West Germany, all major parties favored a pro-American position in the Cold War.

Only in France did official party positions conflict in a manner which crosscut traditional left-right cleavages on domestic policies. The French right, following the lead of De Gaulle, was in favor of French disengagement from the Western alliance, as was the Communist party. The parties of the center and the Socialists (SFIO) took a pro-Western-alliance position. It is interesting to note as shown in table 16, that the followers of the pro-Western parties followed De Gaulle's lead rather than that of their own parties.

The most that could be inferred from the middle majority model is that there would be cleavage between followers of the Communist and non-Communist parties regarding the Cold War. Tables 16 and 17 show that this is true for Italy but not for France. In Italy, most Communists are proneutralist, while most members of other parties favor siding with the United States. Also, in Italy most Communists believe there is no danger of a Soviet attack, while most followers of the non-Communist left believe there is little or no danger, and most of the center and right believe there is some or great danger. There are no such cleavages in France. A majority of the followers of each type of party are proneutralist. Also, for each party group, the modal response is that there is no danger of a Soviet attack.

In summary, the middle majority model predicted no cleavage between parties over the Cold War, or, at most, only cleavage between followers of Communist and non-Communist parties. There was cleavage between parties in Italy and Japan, but not in Britain, West Germany, and France.

TABLE 15

Danger of Communist Attack and Party Preference

A. West Germany*

Danger of Soviet Attack on Western Europe	Party Preference		
	CDU/CSU	FDP	SPD
Great deal	7.1 (22)	5.0 (2)	5.4 (14)
Some	30.9 (96)	30.0 (12)	23.2 (60)
A little	39.2 (122)	47.5 (19)	45.6 (118)
None	22.8 (71)	17.5 (7)	25.9 (67)
Total	100.0 (311)	100.0 (40)	100.1 (259)

B. Great Britain†

Danger of Soviet Attack on Western Europe	Party Preference		
	Conservative	Liberal	Labor
Great deal	4.0 (12)	2.2 (2)	5.2 (18)
Some	18.8 (56)	16.7 (15)	21 8 (76)
A little	34.2 (102)	41.1 (37)	30.9 (108)
None	43.0 (128)	40.0 (36)	42.1 (147)
Total	100.0 (298)	100.0 (90)	100.0 (349)

C. France*

Danger of Soviet Attack on Western Europe	Party Preference		
	Right	Center	Left
Great deal	5.0 (13)	1.6 (2)	2.1 (6)
Some	24.0 (63)	26.8 (33)	16.6 (47)
A little	24.0 (63)	23.6 (29)	13.8 (39)
None	46.9 (123)	48.0 (59)	67.5 (191)
Total	99.9 (262)	100.0 (123)	100.0 (283)

D. Japan*

Danger of Communist Chinese Attack in Asia	Party Preference		
	Liberal-Democratic	Democratic-Socialist	Socialist
Great deal	3.6 (5)	13.3 (2)	6.0 (5)
Some	42.8 (59)	33.3 (5)	34.5 (29)
A little	26.1 (36)	26.7 (4)	28.6 (24)
None	27.5 (38)	26.7 (4)	31.0 (26)
Total	100.0 (138)	100.0 (15)	100.1 (84)

* Lambda (asymmetric) = 0.

† Lambda (asymmetric) = .002.

TABLE 15—*Continued*

E. ITALY‡

DANGER OF SOVIET ATTACK ON WESTERN EUROPE	PARTY PREFERENCE		
	Right	Center	Left
Great deal	13.1 (11)	22.6 (66)	6.8 (22)
Some	34.5 (29)	32.2 (94)	15.5 (50)
A little	31.0 (26)	18.5 (54)	23.2 (75)
None	21.4 (18)	26.7 (78)	54.5 (176)
Total	100.0 (84)	100.0 (292)	100.0 (323)

‡ Lambda (asymmetric) = .240.

TABLE 16

PREFERRED ALLY IN COLD WAR AND PARTY PREFERENCE (NON-COMMUNIST)

A. FRANCE

FRANCE SHOULD SIDE WITH	PARTY PREFERENCE			
	Right	Center	Non-Communist Left (SFIO)	Communist
U.S.	39.4 (111)	37.6 (50)	28.9 (52)	12.7 (13)
Neither	57.8 (163)	59.4 (79)	66.7 (120)	66.7 (68)
USSR	2.8 (8)	3.0 (4)	4.4 (8)	20.6 (21)
Total	100.0 (282)	100.0 (133)	100.0 (180)	100.0 (102)

B. ITALY

ITALY SHOULD SIDE WITH	PARTY PREFERENCE			
	Right	Center	Non-Communist Left	Communist
U.S.	80.9 (72)	82.9 (295)	56.0 (116)	13.6 (18)
Neither	19.1 (17)	17.1 (61)	43.5 (90)	75.0 (99)
USSR	...	...	0.5 (1)	11.4 (15)
Total	100.0 (89)	100.0 (356)	100.0 (207)	100.0 (132)

In terms of the second prediction, there was cleavage between the Co munists and non-Communists in Italy but not in France. However, Italy even with the Communists removed there was still cleavage betwe the followers of the non-Communist left and the followers of the center a right regarding the danger of a Russian attack.

TABLE 17

DANGER OF COMMUNIST ATTACK AND PARTY PREFERENCE (NON-COMMUNIST)

A. FRANCE

Danger of Soviet Attack on Western Europe	Party Preference			
	Right	Center	Non-Communist Left (SFIO)	Communi
Great deal	5.0 (13)	1.6 (2)	2.2 (4)	1.9 (
Some	24.0 (63)	26.8 (33)	20.3 (36)	10.4 (1
A little	24.0 (63)	23.6 (29)	18 1 (32)	6 6 (
None	46.9 (123)	48.0 (59)	59.3 (105)	81.1 (8
Total	99 9 (262)	100.0 (123)	99.9 (177)	100.0 (10

B. ITALY

Danger of Soviet Attack on Western Europe	Party Preference			
	Right	Center	Non-Communist Left	Communis
Great deal	13.1 (11)	22 6 (66)	8.3 (16)	4 6 ((
Some	34.5 (29)	32.2 (94)	19.8 (38)	9 2 (1:
A little	31.0 (26)	18 5 (54)	27.6 (53)	16 8 (2:
None	21.4 (18)	26.7 (78)	44.3 (85)	69 5 (9
Total	100.0 (84)	100.0 (292)	100.0 (192)	100.1 (13

CONCLUSIONS

In Britain and West Germany, aside from some minor cleavage expresse in party choice regarding which country to side with in the Cold Wa there is no cleavage based on Cold War issues. No significant cleavage i expressed in party choice or between parties.

A second configuration occurs in Japan, where there is some cleavag based on Cold War issues. There is cleavage between parties (most Social ists are neutralist while others are usually pro-American) and some mino cleavage expressed in party choice.

If the Communist party is classified with other left-wing parties, a thir configuration occurs in France. In that nation, cleavage over the Cold Wa is expressed in party choice, but there is no cleavage between parties ove

this issue. If the Communists are excluded from tabulations, neither of the two types of cleavage is found in France.

Finally, in Italy the Cold War creates both cleavage between parties and cleavage expressed in party choice. Both types of cleavage persist, even if Communists are excluded from the tabulations.

The two concrete predictions derived from the middle majority model were that the Cold War was a short-run factor making for a decline in cleavage based on issues of class, and that Communists might express attitudes toward the Cold War which were different from those held by non-Communists. First, the findings just reviewed suggest that the Cold War is not a significant source of cleavage in nations where there is less contention between parties over issues of class conflict (West Germany and Britain), and is a source of cleavage in those nations where issues of class conflict are still a salient part of the political rhetoric (France, Italy, and Japan).[12] It seems reasonable to conclude that cleavage over Cold War issues reflects and reinforces political party conflict where the rhetoric of social class conflict is still in use, rather than the Cold War reducing conflict over class issues.

Second, Communists in Italy, but not in France, are set apart by their attitudes concerning the Cold War. Again, the predictions of the middle majority model are not confirmed in any clear-cut fashion. The middle majority model's view of the role of foreign affairs holds unequivocally only in Britain and West Germany.

The consensus and cleavage model is much simpler in its predictions. It states that foreign affairs may become a source of cleavage. In Italy, France, and possibly, Japan, this is borne out by our data. However, the more specific prediction that the Cold War facilitates measures which " 'create' a situationally based consensus" (Janowitz and Segal 1967, p. 617) does not seem to hold for Italy, France, or Japan. The model of consensus and cleavage does not recognize that foreign affairs issues can be a source of cleavage which supplements party conflict over issues of class conflict.

The role which cleavage over foreign affairs has played and will play in the politics of industrial democracies is of critical importance to political sociology. Which social factors help to explain long-term changes in mass attitudes toward foreign affairs? Do such long-term changes in attitude have any effect on the political process?[13] These same questions might be asked about selected segments of the public which have an important role

[12] Like the Communist parties of Italy and France, the Japanese Socialist party adheres to a Marxist doctrine of class conflict. In both its traditional and revisionist forms, this doctrine points out the exploitative nature of the capitalist system and calls for major structural changes in the organization of society.

[13] A first step toward answering this question is provided by Warren E. Miller (1967). By analyzing a panel study, Miller attempts to determine if changes in foreign affairs attitudes have an effect on changes in party preference in the United States.

to play in public consideration of foreign affairs.[14] Finally, one can hardly overlook the new element of cleavage which foreign policy has recently injected into American politics. Dahl (1966, pp. 398–99) and Janowitz and Segal (1967, p. 617) see this type of cleavage as a likely source of future conflict in the industrial democracies. What are its institutional and structural sources and its political effects? Can industrial nations with contending political parties look forward to cleavage over foreign policy as an independent and continuous source of political conflict? Under what conditions would such conflict lead to a reformation of political parties or even the entire political system?

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[14] One scheme which may be used to categorize these important segments of the public is found in work of James N. Rosenau (1961). For an analysis of opinion change regarding foreign affairs among specific segments of the public, see Rosi (1965) and Smith (1961).

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A Comparison of Book Reviewing by the *AJS* and the *ASR*[1]

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Complementary to a scientific interest in professional journals as a means of scholarly communication, editors of these journals have several reasons for exploring the types of public they serve and the selective processes by which each journal issue comes into being. Within sociology there is an interest in comparing the *American Journal of Sociology* (*AJS*), the oldest journal, with the *American Sociological Review* (*ASR*), the official journal of the American Sociological Association.

An annual report on the flow of manuscripts for the *ASR* is given in the *American Sociologist*, and a similar report is given by the editor of the *AJS* at the annual meeting of editorial advisors. A step toward more detailed analysis of editorial operations was taken by the editorial office of the *AJS* a couple of years ago when tabulations were made of the amount of time taken for each step between receipt of manuscript and publication: interval for referees to indicate they would read the paper, interval for reply from referees, and so on. That tabulation will be repeated in the near future, and editors of other sociological journals have been requested to make parallel tabulations in the interest of greater efficiency.

The sharp rise in the number of sociological books published has created a greater competition between articles and book reviews for the available space in each issue. One has the impression that writing by sociologists has increased more rapidly than the total number of pages available in sociological journals, much as the latter have multiplied. Thus editors repeatedly face the question of how many and which books should be reviewed. And, with this pressure for space in each issue, is there perhaps too much overlapping of reviews by the *AJS* and *ASR*? The problem of space allocated to reviews in each journal separately is also a major problem in insuring coverage of the output of books, avoiding adoption of fashions as to which books or which kind will be reviewed, etc. (see Stinchcombe and Ofshe 1969).

Previous tabulations were made of books reviewed between 1962 and 1965 and between 1966 and 1967 by the *AJS* and/or the *ASR*. The frequencies for 1962–65 are given in table 1 and those for 1966–67 in table 2. During the first period, each journal reviewed about a third of the books reviewed by the other. During the second period, the *ASR* continued to review a third of the books covered by the *AJS*, but the *AJS* reviewed less

[1] This is another in a series of efforts to refine the processes of journal editing. Related discussions by other editors have appeared in the *American Sociologist*. We hope more editors will also attempt to analyze their own procedures.

than a fifth of those reviewed by the *ASR*. The latter is only an apparent change, as indicated below.

In each period the reviews published by both journals typically appeared earlier in the *ASR*. In part because of this lag, it has seemed preferable to extend the analysis by following reviews of a single cohort of books in the two journals. Books published in 1965 were selected because of the belief (justified by the results) that virtually all reviews of 1965 books would have appeared by the end of 1968. Tabulations for this cohort are shown in table 3. The pattern formed by the 283 books reviewed by the end of 1968 differs markedly from the pattern of all reviews in 1966–67, the period in which 292 reviews for this cohort, representing about 80 percent of the books of that cohort, were reviewed. The difference is due mainly to the lag of the *AJS* behind the *ASR* in reviewing cohorts prior to 1965, as we shall explicate in the next section.

TABLE 1

OBSERVED TABULATIONS OF REVIEWS 1962–65

	ASR		
AJS	Reviewed	Did Not Review	TOTAL
Reviewed	305	546	851
Did not review	495	...	...
Total	800	...	...

TABLE 2

OBSERVED TABULATIONS OF REVIEWS 1966–67

	ASR		
AJS	Reviewed	Did Not Review	TOTAL
Reviewed	87	174	261
Did not review	376	...	...
Total	463	...	...

TABLE 3

OBSERVED TABULATIONS OF REVIEWS OF 1965 COHORT

	ASR		
AJS	Reviewed	Did Not Review	TOTAL
Reviewed	67	31	98
Did not review	185	...	...
Total	252	...	...

COHORT VERSUS PERIOD TABULATION OF REVIEWS

Consider the following model, much overdrawn, of the reviewing proces each year a cohort of $a + b$ "reviewable" books enters the system. Of thes a will be reviewed by journal X, and 0 will be published by journal Y th first subsequent year. The second year, journal X will review no books fro this cohort, but journal Y will review the b books journal X did not revie *plus* a fraction θ of those it did review.

The model implies that over a two-year period journals X and Y woul publish $2a$ and $2b + 2\theta a$ reviews respectively, but only θa books would b reviewed twice within the interval. That is, we would observe table 2

TABLE 2′

TWO YEARS OF REVIEWS IMPLIED BY THE MODEL

	Journal Y		
Journal X	Reviewed	Did Not Review	Total
Reviewed	θa	$2b+\theta a$	$2b+2\theta a$
Did not review	$(2-\theta)a$	...	...
Total	$2a$	...	...

TABLE 3′

COHORT OF REVIEWS IMPLIED BY THE MODEL

	Journal Y		
Journal X	Reviewed	Did Not Review	Total
Reviewed	θa	b	$b+\theta a$
Did not review	$(1-\theta)a$	...	...
Total	a	...	...

For a single *cohort* we would observe table 3′. The proportion of all book reviewed which are reviewed by both journals X and Y would be $\theta a/[(1 - \theta)a + b]$, in this notation.

Now, to show how period data can confuse one's understanding of a particular cohort, we substitute $a = 250$, $b = 30$, and $\theta = .30$ in the above tables to obtain tables 2″ and 3″, respectively. We hope a comparison o tables 2″ and 3″ with tables 2 and 3, giving *observed* tabulations, will con vince the reader that a lag (although not so simplistic as the one in the model) is responsible for the apparent inconsistency between tables 2 and 3

A realistic model would contain more than three parameters and would describe the lag by a probability density. We do know that the actual parameters have changed over time. From 1965 to 1968, for example, the

AJS has devoted a decreasing number of pages to reviews, while the *ASR* has expanded pages for reviews by about a third: *AJS* devoted 21 percent of its pages to reviews, *ASR* 27 percent. However, a large part of the difference between table 1 and table 2, given above, is undoubtedly a superficial consequence of a lag, rather than of changes in parameters, since the proportion of books reviewed by both journals will be more seriously underestimated for a shorter than for a longer period.

TABLE 2″

HYPOTHETICAL TABULATION OF TWO YEARS OF REVIEWS WITH $a=250$, $b=30$, $\theta=.30$

	Journal Y		
Journal X	Reviewed	Did Not Review	Total
Reviewed	75	135	210
Did not review	425	...	...
Total	500	...	...

TABLE 3″

HYPOTHETICAL TABULATION OF A SINGLE COHORT OF REVIEWS WITH $a=250$, $b=30$, $\theta=.30$

	Journal Y		
Journal X	Reviewed	Did Not Review	Total
Reviewed	75	30	105
Did not review	175	...	...
Total	250	...	...

Finally, this effect is not due simply to a *mean* lag, over all reviews, of the *AJS* behind the *ASR*. The effect would be just as important if for each book the direction and length of the lag were determined by a random process. *We thus urge that all future comparisons use the cohort rather than the period approach.*

DISTRIBUTION OF TIME TO REVIEW FOR 1965 BOOKS

Table 4 gives the breakdown of dates when the reviews appeared by six-month intervals, for each journal. There is no significant effect on date for either journal if the book has or has not been (will or will not be) reviewed by the other journal. That is, there is no evidence (nor was any anticipated) that book review editors base decisions on whether the other journal has or has not reviewed a given book. The median review issue of 1965 books was November 1966 for the *AJS* and June 1966 for the *ASR*. In summary, (*a*)

TABLE 4

Reviews of 1965 Books by Journal and by Six-Month Interval

	AJS (%)	*ASR* (%)
1965:		
Jan.–June	0	0
July–Dec.	2	18
1966:		
Jan.–June	20	41
July–Dec.	35	26
1967:		
Jan.–June	35	8
July–Dec.	4	4
1968:		
Jan.–June	2	1
July–Dec.	2	2
Total	100 (98 cases)	100 (252 cases)

Note.—Percentages rounded to nearest percentage point.

TABLE 5

Reviews of 1965 Books by Journal and by Subject Area

Subject Area	*AJS* (%)	*ASR* (%)	Difference (%)
Methodology	4	7	− 3
History of social thought	6	5	1
Organizations	14	11	3
Social psychology	12	8	4
Collective behavior	3	1	2
Comparison and change	10	10	0
Stratification	7	6	1
Demography	2	3	− 1
Disorganization	4	14	−10
Education and youth	7	6	1
Religion	2	3	− 1
Urban society	7	6	1
Family	4	6	− 2
Race relations	6	5	1
Public opinion	2	2	0
Academics	5	2	3
Arts	2	3	− 1
Textbooks	0	2	− 2
Total	97 (98 cases)	100 (250 cases)	...

Note.—Percentages rounded to nearest percentage point.

ire is about a six-month mean lag of the *AJS* behind the *ASR*, and (*b*) the ırter mean time to review for the *ASR* produces a greater skew in its disbution of review dates.

ƷTRIBUTION OF TOPICS OF REVIEWED BOOKS

e reason why the proportion of books in the 1965 cohort which were reıwed by both journals (67/283 = .24) is not greater could be specializan by each journal. Table 5 gives a breakdown of reviews in each journal eighteen major subject areas. The correspondence is striking; we cannot ect the hypothesis that the journals have identical review policies. There ɔne difference which would be significant if taken in isolation: books on ;ial disorganization are more commonly reviewed by the *ASR* than by the 'S. Even this difference is not great enough to convince us the journals ve different review policies, however, when properly placed in context as e of eighteen differences with a total of seventeen degrees of freedom. At present time the *AJS* does have a policy of not reviewing textbooks. ıe *ASR* is not explicit about such a policy but reviews very few. Cutting ·oss the classification of table 5, proportionately fewer foreign books are riewed by the *AJS* than by the *ASR*. But the selective practices which d to reviews of different books by the journals, with relatively little erlap, have yet to be ascertained.

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Commentary and Debate

COMMENTS ON WANDERER'S ARTICLE ON RIOT SEVERITY AND ITS CORRELATES

A number of findings reported in a recent article, "An Index of Riot Severity and Some Correlates" (Wanderer 1969), are suspect on several accounts. Wanderer constructs an index of riot severity, then correlates the scale values with selected community characteristics. I have no objection to his design of the Index; however, his attempt to relate community characteristics to riot severity leaves much to be desired in the way of conceptualization and methodology.

First, excluding the *police preparation* measures, which one can reasonably expect to be related to the response by law enforcement to a disturbance and to the resulting severity of the disorder, Wanderer presents little in the way of theoretical justification for his choice of community characteristics. Why, for example, should percentage increase of nonwhites in the 1950–60 decade be related to riot severity? Wanderer cites the study by Lieberson and Silverman (1965) as having guided his selection of community characteristics; yet it is unclear why one would expect variables which were justified in terms of a possible relation to the *location* of a riot to explain also the *severity* of a disorder. Moreover, Lieberson and Silverman reported findings for a much wider range of community characteristics (racial differences in occupation, unemployment rates, store ownership in the ghetto, and community political structure) than Wanderer considers, so one is still left to ponder upon the rationale which governed his selection of explanatory variables.

Second, excluding the *police preparation* measures, Wanderer reports significant correlations for two of the fourteen community characteristics which he considers. When the pickings are so meager, an investigator is particularly obliged to explain that we are not simply witnessing chance correlations due to sampling error and that the findings, in fact, support some coherent account of the causes of riot severity. Wanderer's failure to address this problem is especially unfortunate since one of the two significant associations was with a housing variable. He examines nine housing characteristics, finds only one (percentage living in newer than ten-year-old dwellings) to be correlated with riot severity. An obvious inquiry in this circumstance is to ascertain what is tapped by *this* measure which is not captured by any other housing variable. Yet, this question is not considered.

Third, on the basis of the two significant correlations, Wanderer concludes: "It has been shown that while certain variables do not correlate with the presence or absence of riots in American cities, they do correlate with riot severity. Such variables are more influential in determining the severity of a riot, once it has begun, than they are in determining the outbreak of that riot" (p. 505). This is an entirely unwarranted statement. Wanderer is comparing findings by Lieberson and Silverman on the *causes* of riots with his own on *severity*, although the two studies covered different

time periods and disorders which were vastly different in character. Lieberson and Silverman examined the causes of disturbances during the years 1913–63 which could be classified as "Negro-white race riots" (Lieberson and Silverman 1965, p. 887). Wanderer draws his material on riot severity from the 1967 disorders which were largely instances of Negro rebellion, not interracial violence. One cannot assume, a priori, that these two forms of racial violence which occurred in different time intervals are alternative faces of the same phenomenon. The community characteristics which Wanderer considers to be unrelated to an outbreak of racial violence may well be related to the location of the 1967 disorders. The community characteristics which he argues are related to the severity of a disturbance may be unrelated to the severity of the earlier, interracial riots. His extrapolations are simply unjustified.

Unfortunately, the situation is even worse. Neither the single housing variable which Wanderer finds to be correlated with the severity of a disturbance (percentage living in newer than ten-year-old dwellings) nor the remaining variable for which he indicates a significant correlation (percentage increase of nonwhites) were used by Lieberson and Silverman. They report findings for only one measure of housing quality, the census category "dilapidated." Among the housing variables investigated by Wanderer, "percentage of units with substandard plumbing" appears closest in nuance to the earlier study's housing measure. This variable, incidentally, is reported by Wanderer as being uncorrelated with the severity of a disorder.

With respect to the second community characteristic, "percentage increase of nonwhites," a careful reading of the Lieberson and Silverman paper reveals that they used the measure $(N_{t+1} - N_t)/N_t$, where N_t is the numerical size of the nonwhite population in year t. Wanderer, however, uses the measure "percentage increase of nonwhites *in the total population*" (p. 502)—presumably, percentage nonwhite in 1960 minus percentage nonwhite in 1950, perhaps standardized on the 1950 figure. On the Lieberson and Silverman index, a city which was 5 percent nonwhite in 1950, 5 percent nonwhite in 1960, but experienced a 50 percent increase in total population during the decade would have the value .50; on Wanderer's Index (standardized or unstandardized versions), the value would be zero. Lieberson and Silverman's measure is an appropriate statistic for a social disorganization thesis, which is what they argue. It is unclear just what Wanderer's Index is tapping, but it is evident that we have a very different animal here.

Fourth, Wanderer's methodology appears guaranteed to discard a maximum amount of information in the data. Since the seventy-five cities are classified into eight scale types on riot severity, Wanderer chose to correlate the scale types with community characteristics. His procedure was to average the city values on an independent variable within each scale type, rank order the averages, then compute a Spearman correlation over the eight observations. The difficulty with this approach is that by averaging city values within a scale type, the possibly substantial within-category variation is ignored. In general, a classification is meaningful if it tends to group like values on a variable, with the result that the categories "explain" a sig-

nificant proportion of the total variation in the variable. If the catego averages are substantially the same, however, then the variation is large within category and remains unexplained by the classification. In this ci cumstance, a ranking of the category averages is equivalent to rankin values which are not significantly different from one another.

To investigate the effects of Wanderer's methodology on his findings, collected data on city characteristics using the sources cited in his articl The validity of the classification on the single housing variable reported l him to be correlated with riot severity was examined by performing a on way ANOVA on this variable. The result was not significant at the .10 lev ($F_{7,66}$ = 1.19).[2] Consequently, Wanderer's classification is irrelevant, sin the variation is essentially within category. The correct procedure would l to rank the cities on the independent variable, assign identical avera values on the dependent variable to cities in each scale type, then co pute a correlation over the seventy-five observations.[3] Employing this pr cedure, I computed a Spearman correlation between riot severity and pe centage living in newer than ten-year-old dwellings which equals −.10 (i significant at the .10 level) in contrast to the −.86 value reported b Wanderer.

Fifth, Wanderer's use of the Spearman statistic is unfortunate in that prevented him from investigating the possibility of a spurious relation b tween riot severity and the community characteristics. He writes: "Once riot takes place, the greater the percentage increase of nonwhites, th greater the severity of the riot" (p. 502). I have no objection to this as descriptive statement, but the intimation in the article is that a causal rel tion somehow exists between change in percentage nonwhite and riot seve ity. This inference, however, loses support once an appropriate control introduced. Since the riot-severity scale uses items such as "called the sta police" and "called national guard," the numerical size of the Negro popu lation would seem to be an obvious community characteristic for investig tion. Communities such as Mount Clemens, Michigan (nonwhite popula tion equal to 2,500 in 1960), or Elgin, Illinois (nonwhite population equal t 1,700), would be hard pressed to mount a disorder worthy of national guar attention. Due to the limitations of his methodology, however (the Spea man coefficient has no partial), Wanderer was not able to control for Negr population size and was probably discouraged thereby from delving into th conceptual question of spurious effects.

To pursue this line of inquiry, I calculated product-moment correlation

[1] Using the sources reported by Wanderer, I was able to obtain information on sevent four of the seventy-five cities included in the severity scale. No reference was found t Wyandanch, N.Y., in either the *County and City Data Book, 1967* (U.S. Bureau of th Census 1967) or in the *1960 Census of Population* (U.S. Bureau of the Census 1960)

[2] Wanderer used category medians for the housing variable, although the skewness of th distribution is minor. I replicated the ANOVA using city ranks and obtained the sam result—the classification is insignificant at the .10 level ($F_{7,66}$ = 0.94).

[3] See Siegel (1956, pp. 201–11).

between a seven-category version of the severity scale[4] and the three nonwhite population-increase measures discussed under the third point—change in percentage nonwhite, 1950–60; change in percentage nonwhite, 1950–60, as a proportion of the 1950 figure; percentage change in nonwhite population, 1950–60—controlling on nonwhite population size in 1960. In order to maintain comparability with Wanderer's analysis, all southern cities were deleted from these computations. The results are presented in table 1. Only the first measure, change in percentage nonwhite, 1950–60, is significant at the zero-order level; when nonwhite population size is controlled, all versions of the change measure are insignificant.[5]

TABLE 1

CORRELATIONS BETWEEN RIOT SEVERITY AND MEASURES OF NONWHITE POPULATION INCREASE, FOR NON-SOUTH

Measure of Nonwhite Population Increase	Product-Moment Correlation with Riot Severity: Zero Order	Product-Moment Correlation with Riot Severity: Controlling for Nonwhite Population[a]
Change in percentage nonwhite, 1950–60	.272*	.187
Change in percentage nonwhite, 1950–60, standardized by 1950 value	.121	.144
Percentage change in nonwhite population, 1950–60	.120	.195

[a] Nonwhite population (log x).
* $P < .05$.

In summary, Wanderer's conclusion that certain variables "are more influential in determining the severity of a riot, once it has begun, than they are in determining the outbreak of that riot" (p. 505) is in no way supported by his analysis. Wanderer's comparison with the Lieberson and Silverman article is inappropriate on two accounts: the two studies investigated disturbances which occurred during different time periods and which were very different in form and perhaps in etiology as well, and the variables which Wanderer found to be correlated with riot severity are not the variables considered by Lieberson and Silverman. Moreover, as a result of improper methodological procedure, one of the two community characteristics for which Wanderer reports a significant correlation is uncorrelated

[4] The single non-South observation in scale type 8 was included with the scale type 7 cities.

[5] Zero-order and partial τ's were also calculated. These coefficients exhibit a pattern similar to the product-moment correlations reported in table 1, with the magnitude of the partials being smaller than the zero-order coefficients. A test for the significance of a partial τ is not available (Siegel 1956, pp. 213–29).

with riot severity, while the second characteristic becomes insignificant when the numerical size of the Negro population, a conceptually prior variable, is controlled.

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THE AUTHOR REPLIES

The bulk of Mr. Spilerman's substantive criticism seems to be based upon two errors. The first concerns what he thought was the title of my paper; the second concerns what he assumes was the intention of my research.

Although he gave my paper careful reading, Spilerman apparently neglected to read correctly its title. He incorrectly believed that "An Index of Riot Severity and Some Correlates" (Wanderer 1969) was titled "An Index of Riot Severity and Its Correlates." My intention is clearly expressed in the original title and the selection of the word "some." The rationale for selecting "select" variables is discussed on page 501 (Wanderer 1969), where I note that a variety of sources, including popular notions, provided explanations of riots and the courses they run. Included as one screening device in the selection of "select" variables was the Lieberson and Silverman study (1965).

My use of the Lieberson and Silverman study as a screening device resulted in a second misunderstanding. Spilerman assumed that I sought to replicate it. Enlarging that error, he asserts that I sought to compare my findings with theirs, that I did not do a good job at replication, that I imply my findings are better than theirs, that I suggest my findings for riot severity in 1967 were so good that they explain what was going on in 1913, and finally, that I assume riot severity is the same thing as the presence or absence of a riot. He then instructs us and shows us that these assertions and assumptions are untenable. I agree. Obviously no replication was undertaken, nor did I believe or suggest that an examination of riot severity during one summer is tantamount to a study of rioting over the period 1913–63.

In one place Spilerman asserts that I did *not* examine the causes of riot severity, while in another place he calls me to task for intimating throughout my paper that there *is* a causal relation between change in percentage nonwhite and riot severity. Obviously he can be only half correct; in this case, he is first-half correct. I do not raise the issue of causality.

Spilerman's technical criticisms and assertions constitute a mixed bag. On some issues he is clearly correct; on others, the issues are problematic.

First, he is correct in saying that the mean does obscure information (as does any summarizing measure). He is also correct when he says that the Spearman rank correlation has no partial.

Other technical suggestions, however, are problematic. One illustration of this is his stated use of analysis of variance on Guttman scale types. Usually the research design insures the independence of groups or the deliberate matching of groups for analysis of variance. It will be remembered that Guttman scaling *orders* both events and *cities* along a unidimensional continuum. Cities were included in the study initially because they had had a riot. The scale then orders the cities and combines them into scale types (groups) ordered along a continuum according to the magnitude of riot severity. The ordering of cities (by severity) means the riot severity of each is linked to the other. Placement in scale types is not an independent phenomenon. Moreover, the cities were not matched. Although Lieberson and Silverman did match riot and nonriot cities, my research on riot cities did not attempt to match groups. Since the assumption of the independence of groups (scale types) is not satisfied in the partial ordering of the groups by the scaling procedure, and since no matching took place, an unqualified use of analysis of variance appears unwarranted.

What Spilerman has succeeded in demonstrating is that a little misunderstanding can go a long way.

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Book Reviews

Confrontation: The Student Rebellion and the Universities. Edited by Daniel Bell and Irving Kristol. New York: Basic Books, 1969. Pp. xii + 191. $5.95.

University in Turmoil. By Immanuel Wallerstein. New York: Atheneum Publishers, 1969. Pp. ix + 147. $4.95.

Higher Education in Social Psychology. Edited by Sven Lundstedt. Cleveland: Case Western Reserve University Press, 1968. Pp. x + 275. $7.50.

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These three books throw light not only on the subjects with which they avowedly deal but also on the extent to which and the way in which the social sciences inform our understanding of contemporary history. The essays edited by Daniel Bell and Irving Kristol include narratives of events at Berkeley, San Francisco State, Columbia, and Cornell, as well as analytical accounts of student activism and of the academic system. Immanuel Wallerstein's book is a political analysis of the relationship of the university to society, to government, and to its own members. Sven Lundstedt has edited a collection of papers given at the 1966 Conference on Graduate Education in Social Psychology, papers which raise questions not only about the relation of social psychology to other disciplines but also about the whole nature of higher education. All three books cope only in the most limited way with the problem of relating their specific concerns to a more general view of society; all three at certain points blur crucial distinctions.

The history and structure of a practice is never to be identified with the history and structure of the institutions which are the bearers of that practice. Not only has the practice of independent intellectual inquiry not always been at home in universities, but universities at certain periods (England in part of the eighteenth century, for example) have been inimical to that practice. Moreover, there are other legitimate and praiseworthy practices usually carried on in universities, such as the education of the young into the contemporary range of social opportunities and the devising of socially useful technologies. When these simple distinctions have been drawn, the facts accumulated in these three books are put into a rather different perspective from that in which almost all the writers tend to view them.

Daniel Bell does draw our attention to the crucial difference between the goals of the black students at Columbia and those of the SDS, and to the practical importance of not misconstruing their temporary alliance. It is clear that black students generally want, as the founders of the land grant colleges wanted, a redirection of energies toward the task of education for social opportunity. It is equally clear that white radicals are all too often enemies of independent intellectual inquiry. Hence their grotesque self-righteousness and intolerance. But whence does this spring?

S. M. Lipset in his essay in the Bell and Kristol volume writes that "the major conclusion to be drawn from a large number of studies in the United

States and other countries is that left-wing students are largely the children of left-wing or liberal parents" (p. 51). But in fact the parents rarely expressed the enmity to independent intellectual inquiry so characteristic of the children; so Lipset's observation helps to define a problem rather than a solution. One hypothesis might be as follows.

The liberals in our society have tended to deify the university as it is and to identify the cause of the preservation of the university as it is with that of the preservation of independent intellectual inquiry. But in so doing they have misled their own radical children into identifying the university with independent intellectual inquiry as targets for attack. This confusion appears in Daniel Bell's otherwise excellent reply to Zbigniew Brzezinski's "Revolution and Counterrevolution (but Not Necessarily about Columbia!)" (*New Rebublic*, June 1, 1968), when he writes that "if the university were a microcosm of society his points would be well-taken. *But the university is not the microcosm of the society; it is an academic community,* with a historic exemption from full integration into the society, and having an autonomous position in order to be able to fulfill its own responsibility, which is to conduct untrammeled inquiry into all questions." But the university can only claim such exemption insofar as it protects the practice of independent inquiry from distortion by its other commitments. To this distortion liberal academics have largely contributed.

The SDS has protested against the financial links between the universities and the military, and many liberals have had a bad conscience about these links. Undeniably there are real moral issues here, but for someone concerned with the fate of intellectual inquiry the problem of research grants has to be posed in a different way. Academic social scientists, like other academics, have almost uniformly complained that not enough money was channeled toward their disciplines; the case has yet to be properly made that the social sciences, as genuine forms of intellectual inquiry, have been deformed and debased by the indiscriminate acceptance of research grants for a plethora of perhaps practically useful and morally high-minded but certainly intellectually unilluminating purposes. To claim the prerogatives of independent intellectual inquiry for the practices of those pragmatic soup kitchens of the mind which so many universities are is for the liberals to invite an equally confused counterattack. The confusions of SDS mirror the confusions of their liberal parents admirably.

The same confusion between institutions and practices underpins the fallacy of treating universities as primarily political societies, a view which, after a cursory glance at "The University as Idea and Ideal," dominates Wallerstein's book. Wallerstein is concerned with placing the problems of the university in a general political context and with relating his proposals for greater faculty and student participation in university government to the cause of general democratization. His view obscures the truth contained in G. K. Chesterton's reply to the lady who during the First World War handed Chesterton a white feather and demanded, "Why aren't you in the front line with the men who are defending our civilization?" "Madam," replied Chesterton, "I am the civilization they are fighting to defend."

Insofar as universities are genuinely places of independent inquiry, the activities carried on there are activities which are worthwhile in themselves rather than as means to anything else. The political means appropriate to universities are the means appropriate to the defense of those ends.

To these ends the relevance of democratic principles has yet to be adequately shown; yet such a demonstration would be a prerequisite for arguing as Wallerstein does.

Another crucial feature of all these books is the extent to which, in their explanation of behavior in universities, they ignore the influence of false sociological theorizing and of misinformation. This is most obvious on a large scale in the Marcusean belief of SDS theorists that they are confronted by a total well-integrated social order in which higher education serves the purposes of the system as a whole. The truth is that in advanced industrial societies most sectors expand, but in different directions and at different rates. Higher education becomes less and less well integrated with the occupational structure, a fact on which Samuel Lubell's essay on "That 'Generation Gap'" (Bell and Kristol, pp. 58–66) throws some light. It is difficult to believe that the consequent transformation of the student role from that of a well-comprehended transition to an adult career into a much less determinate living through of a period with an indefinite horizon has not been a key factor in student unrest. But, if this is so, we have a fine example of radical students adopting an explanation of their situation which precisely conceals its true character.

I wrote at the outset that these books throw light on the way in which social science informs the understanding of contemporary history. What I had in mind was indeed the extent to which it is now true that sociological theories of contemporary behavior have to take account of the way that behavior is informed by false sociological theories about it. The part played by sociology students in university disorders may be just that of being the bearers of the relevant misinformation to their fellow students; and perhaps this is not entirely our fault as teachers of sociology but is part of the character of the subject. In either case we have cause to reflect, and all three of these books provide evidence for us to take account of.

The Active Society: A Theory of Societal and Political Processes. By Amitai Etzioni. New York: Free Press, 1968. Pp. xxvi + 698. $10.95.

Robert M. Cook

American Independent Movement and Industrial Workers of the World

This is the kind of book that gives sociology a bad name. How easy it makes things for those who argue that sociologists elaborate the obvious—like "all other things being equal, *the larger the number and the greater the diversity of the perspectives of a group of units, the more difficult it is to achieve a consensus*" (p. 478, his italics). Over 700 pages of this kind of writing are devoted to justifying Etzioni's grandiose claim to have developed the "foundations for a theory of macroscopic action" (p. viii). Granted that he modestly uses the word "foundations" because "our knowledge is too limited and the task of building a comprehensive theory is too demanding for any one mason to lay much more than a base" (p. viii) and admits that this new theory is "at best partly new" (p. x)! His objective, he says, is to explore the conditions under which societies of the "post-modern" period (since 1945) can exercise the option of becoming masters of themselves, or "active" (p. vii). The results are literally unbelievable.

Serious analysts of society will find little of value in this compendium of footnotes, jargon, and tautologies. The apologists for the rulers of our society will, on the other hand, find a wealth of scientific-sounding phrases with which to mask their favorite prejudices. The term "post-modern," for example, is clearly an ideological cover for those who are afraid or unwilling to deal with capitalism as a major sociohistoric formation. In this book dedicated to the "active ones, my students at Columbia and at Berkeley," about three paragraphs are devoted to a discussion of capitalism (pp. 519–20). Etzioni's students have long since left him behind.

The second major ideological component of this book is Etzioni's idealism, despite his claim to go "Beyond the Antimony of Idealism and Realism" (p. 21). "Active societies" are engaged in realizing their *values*, according to Etzioni. What Soviet and American societies "tend to lack most is effectual commitment" to their values (p. 13). This *is* an idealist approach, and it is factually wrong. What prevents the realization of some (not all) American values is not a mystical lack of effectual commitment but a concrete social structure based upon the ownership and control of productive resources by a small number of people, and another set of values clustered around private property and profit calculations which they use in their decisions. Etzioni totally ignores the basic socioeconomic principle that "the rate and direction of economic development in a country at a given time depend on both the *size* and the *mode of utilization* of the economic surplus. These in turn are determined by the degree of development of productive forces, the corresponding structure of socioeconomic relations, and the system of appropriation of the economic surplus that those relations entail" (Paul Baran, *The Political Economy of Growth* [New York, 1957], p. 44).

He has, as a result, almost nothing to say about classes, class struggles, or revolution. The major social forces which have shaped modern history, and which will usher in the "post-modern" period—it did not arrive in 1945—are nowhere dealt with in serious fashion. Etzioni's own ideological position and the limits of his imagination and vision are made clear by his continual citing of western European countries governed by social democratic parties as approximations of "the active society."

For the past five years, I have taught a sociology course on American society and have been heavily involved in what is called The Movement. Recently I have been making a living as a construction worker. *The Active Society* has no relevance for the reality of the America that I know. To learn about how things really are, sociologists should turn to those who by and large have been spurned by academia—for example, C. Wright Mills, Robert Lynd, Paul Baran, Paul Sweezy, or Gabriel Kolko.

As Martin Nicolaus said so clearly, sociologists for too long have had their "eyes turned downwards, and their palms upwards" ("Remarks at the A.S.A. Convention, Boston, 1968," *Catalyst* [Spring 1969]). This book does raise one important question for the profession: Why is it that at this crucial time in our history an "important" professor of sociology at a major American university can produce such nonsense, and worse yet, be taken seriously by his colleagues?

Little Groups of Neighbors: The Selective Service System. By James W. Davis, Jr., and Kenneth M. Dolbeare. Chicago: Markham Publishing Co., 1968. Pp. xv + 276. $5.95 (cloth); $2.95 (paper).

Social Research and the Desegregation of the U.S. Army. Edited and with an introduction by Leo Bogart. Chicago: Markham Publishing Co., 1969. Pp. vii + 393. $7.95.

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The above volumes are similar in that they both deal with extensive social science research on topics related to the military. They are dissimilar in that the first is a recent study (1965–67) of the selective service system, whereas the second is a less recent study (1951) of changing racial attitudes in the U.S. Army.

Davis and Dolbeare set out to examine the selective service system as a complex system/organization, voluntary for the staff but certainly not voluntary for the men who are registered and either disqualified, deferred, or selected. Conscription is assumed to be a necessity at least in the foreseecable future.

The concepts of a volunteer military, a mandatory national service, and a significant reduction of the military force are beyond the scope of the book. The focus of study is the selective service system itself, and the conclusions are that the system has major shortcomings and should be changed.

It is immediately evident to the reader that one of the purposes of the book is to destroy the myth of local boards being "little groups of neighbors." The myth is expertly destroyed. The authors show that board members are not representative of their jurisdictions but rather are "local elites."

In an effort to investigate the opinion of the selective service system's "special public, the registrants," Davis and Dolbeare analyze and present some data on attitudes of University of Wisconsin students, and in the process commit a basic sampling error. The authors attempt to generalize to the whole population of registered males from a sample that almost totally excludes those registrants who failed to qualify for the service (more than one-third) and those registrants who were serving in the Armed Forces or were deferred because of occupation or hardship.

Another methodological error is that of statistical analysis, which was either nonexistent or deftly camouflaged: "We found *no* correlations . . ." (p. 169, my italics); "show *an* association with . . ." (p. 181, my italics). Let it suffice to say that the rigors of statistical analysis and the precise language of mathematics would have considerably increased the scientific credence of the study.

In spite of the shortcomings, a full description of this complex, decentralized organization is combined, in this volume, with some stimulating thoughts on the political role of the social scientist.

Leo Bogart served as a member of a research project that was designed to examine the effects of the initial stages of integration in the U.S. Army. The book consists of two field reports from the project and a forty-one-page introduction which is historically interesting with respect to the problems of government-sponsored social science research and provocative with respect to current racial integration problems.

The volume is significant from three perspectives. First, it is one of the largest surveys on race relations in sheer volume of empirical data. The

data, however, are presented for the most part in percentage comparison tables, since a deadline for the research report precluded detailed analysis.

Second, the research was conducted in an unusual field experiment setting: the process of integration through normal personnel replacement was ongoing. All types and categories of units were available for investigation by the researchers. The subjects inside the "total institution" (the army) were completely accessible to the researchers. Several levels of combat intensity occurred in a way that presented to the researchers a quasi-experimental, time-series design. The process of change could be watched and (through selection) controlled, and the attitude changes could be examined and plotted. This was done successfully and, in my view, validly.

Third, the research focuses on social change: change in policy, which caused change in racial composition of troop units, which in turn caused change in individual racial attitudes. Such change was partly due to the hierarchic system where a combination of loyalty and threat forced compliance with directives. It was partly due to the already deeply entrenched leveling mechanism of the army, where economic, social, and educational background mean less than in civilian life. It was partly due to the exigency of combat, where success, spelled in terms of life and death, required compliance, acceptance, and cohesion. At any rate, Bogart and his associates report convincingly that integration worked in a bureaucracy notoriously resistant to change. I hope history does not prove them wrong.

I think it appropriate to conclude with a quotation from Bogart's research group, which in 1951 recommended: "The Department of the Army should establish a permanent social science planning and research unit, composed of civilian sociologists and social psychologists, to furnish day-to-day counsel on human relations problems." Any volunteers?

Armed Forces and Society. Edited by Jacques van Doorn. The Hague: Mouton & Co., 1968. Pp. 386. Gld. 50.0.

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The relationship between armed forces and the societies which they are supposed to serve is now one of the most prolific fields of political sociology. The breadth and scope of the volume under review exceeds that of any book previously published on the subject, and it suffers inevitably from some unevenness. It is nevertheless refreshing and illuminating to have assembled in juxtaposition case studies from such a variety of national environments, including one or two which provide, as it were, an element of surprise.

The book is divided into five main sections, with introductory chapters on the worldwide context contributed by Morris Janowitz and Jacques van Doorn. A section on "The Military Profession" follows, then one on "Military and Societal Change." A set of four essays on "The Military in the Developing Nations" is restricted in a way which perhaps suggests that the editor considers that there is already sufficient commentary in this area. He and Jan H. Mans contribute a concluding essay on "Peace-keeping Military Forces," which attempts seriously, but with no great depth, to examine the possibility that "the emergence of international forces will help to strengthen the professional pattern of the military" (p. 376). This

process is seen as hopefully redressing the threat to professionalism allegedly resulting from the nationalization and subsequent democratization of the army, described as having been a decisive step toward military intervention in politics and the politicization of the armed forces. It would have been useful if, in view of its attention to the U.N. Congo operation, this essay could have considered the effect of service there on the professional outlook of the Ghanaian and Nigerian armies in particular. A participant, Colonel A. A. Afrifa of Ghana, and a number of observers have seen that experience as the starting point to which the movement for the overthrow of Kwame Nkrumah owed its origin.

To dwell on the final chapter of this important book is, however, to be a little ungrateful for the riches which it otherwise contains. Its strength lies not so much in new theory and method but in the application of fairly well-established theories in new contexts. The contributions by J. A. Jackson on "The Irish Army and the Development of the Constabulary Concept" and by S. Encel on "The Study of Militarism in Australia" have a quality of rarity which deserves to be savored and appreciated, nor are they in any way irrelevant to the global picture. In particular, the piece on the Irish army suggests lines of development for the armies of small uncommitted nations now that there are opportunities for them to adopt a positive military posture in the international sphere. There is a useful parallel between this essay and that of Bengt Abrahamsson on "The Ideology of an Elite: Conservatism and National Insecurity—Some Notes on the Swedish Military" in that not only subject matter but the theoretical bases tend to coincide. Not much work has been done on the British army, in which the officer corps was slower than in most developed capitalist countries to acquire a distinctively middle-class professionalism; and it is therefore disappointing to have to record that C. B. Otley's article on "Militarism and the Social Affiliations of the British Army Elite" leaves me substantially unsatisfied. Otley had to confine the sample for his investigation to officers in the rank of lieutenant general and above between 1870 and 1959. This is too narrow and out-of-date a sample to be relevant to contemporary understanding in that, to have reached this rank, officers would usually have had to be commissioned at least thirty years before, and the essay is therefore essentially concerned with the recruitment pattern up to 1935. However, research workers engaged in this and other fields involving the defense services, morale, and national security will be sympathetic to the problems involved in obtaining such information in most countries.

It is perhaps because the full sensitivities in this respect of the recently independent developing countries have only just taken shape that we seem to know more about civil-military relationships in Africa and Asia than in other parts of the world. Thus in this volume J. J. Wiatr's essay on "Military Professionalism and Transformations of Class Structure in Poland" is, perhaps inevitably, very slight; and one may be forgiven for questioning the total validity of the information on which the authors concerned have based their analyses of the Soviet military. Appropriately, the chapters on West Germany by Ludwig von Friedelburg and Gerhard Brandt, which emphasize the relationship between the military and the economic system, are more convincing than some others. The suggestion is that, in a field where information is necessarily restricted, a high standard of detached academic analysis, here unquestionable, is in some respects less important

than that the writer should have what may be termed the "feel" of the subject. Which is simply to say that in the last resort scientific method is not quite sufficient. Further results of the cooperation between the International Sociological Association and the Inter-University Seminar on Armed Forces and Society at the University of Chicago are awaited with interest.

The Family in Soviet Russia. By Kent Geiger. Cambridge, Mass.: Harvard University Press, 1968. Pp. xii + 381. $11.95.

Social Change in Soviet Russia. By Alex Inkeles. Cambridge, Mass.: Harvard University Press, 1968. Pp. xviii + 475. $12.50.

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The sociological study of the Soviet Union has been on a quiet decline in the United States for almost a decade. There are probably no more sociologists today working on Soviet society than there were in the late 1950s or early 1960s. Perhaps this is partly a result of the increased knowledge of Soviet society removing it from a scholarly *terra incognita.* We cannot duplicate the excitement and spirit of pioneering that apparently existed in the late 1940s and early 1950s. Also notably diminished is the stimulant of the cold war, which helped to define Soviet studies as "relevant" and hence well financed.

Yet even in the heydays of Soviet studies, American sociology as a discipline made a rather modest contribution. No more than a handful of sociologists were trained to be experts on Soviet society. To a considerable extent, the narrowly defined empiricism that prevailed in American sociology was responsible for this (see also preface, pp. xi–xii, in Inkeles).

The decline of the cold war, real or imagined, and the attendant growth of detachment about Soviet society have not drawn hordes of eager scholars, desirous of a more depoliticized atmosphere, to Soviet studies no longer "tainted" by fat government research grants. Such studies are clearly not "where the action is." For those interested in communist affairs, China has emerged as a new mystery to be unravelled. There is also more glamor in areas such as Southeast Asia, Latin America, and Africa, the so-called Third World in general. And finally, there has also been, among sociologists, a vigorous revival of concern with American society prompted by a new outburst of social consciousness. No matter how beneficial or justified these trends and tendencies are, they detract from perceiving Soviet studies as "relevant," one operational definition of "relevant" being something that arouses strong feeling. The number of people in America who either admire or detest the Soviet Union has been shrinking steadily, as has the corresponding level of interest, scholarly and popular.

More recently, students of Soviet affairs (and, as we noted before, few of them are sociologists) have devoted much of their attention to somewhat arid discussions about building models, rearranging concepts, developing theoretical frameworks, generating hypotheses, and arguing about the relationship between area studies, theorizing, and the various academic disciplines.

Against this background, it is a happy and rare occasion to review two major recent works on Soviet affairs written by sociologists who, although they belong to an earlier generation of Soviet scholars, have continued to make enduring contributions to the field.

There is little doubt that Geiger's lucid book is the principal study of the Soviet family in English and probably the best in any language, Russian included. It is an ambitious work that combines several perspectives and approaches: the historical-chronological, the ideological-political, and the sociological-social-psychological.

The Family in Soviet Russia demonstrates once more that it is possible to produce an outstanding study on Soviet society without recourse to the research methods and resources which are at the disposal of sociologists engaged in the study of less guarded societies. Geiger relies on four types of data. One is the interviews of the Harvard Project, of World War II Soviet refugees between 1950–51. The second type of data, together with the first, forms what might be called the sociological backbone of the study; it comes from a German doctoral dissertation (still unpublished, surprisingly enough) which utilized the participant observation of German prisoners of war repatriated in 1954. The third source was Soviet publications, ideological, sociological, and journalistic. Finally, Geiger used relevant Western sources, including an account by the Polish writer Kozinsky (better known as the author of the *Painted Bird* and *Steps*) published under the alias of Joseph Novak. Inescapably, a good portion of the data is not very recent; those coming from the Soviet informants record experiences that date back to the 1930s and 1940s; the observations of the German prisoners go back to the early 1950s. Even Kozinsky's excellent report was published in 1959 and incorporates his experiences from the mid-1950s. Insofar as this is a historical study, no objection can be raised to these sources. However, at times it is not sufficiently clear to what degree generalizations about the present are based on the older data.

The story of the Soviet family, as it unfolds, has three major components. They are: the official family policies (including their unintended consequences); the forces of industrialization and urbanization; and political decisions unrelated to but impinging on the family (e.g., the confinement of millions, the vast majority of whom were males in concentration camps). A most striking (and outside the USSR still not properly understood) aspect of the official policies has been the shift from a revolutionary, innovative, and Marxist approach to the family (envisaging its radical change, if not total destruction) to a conservative, puritanic, neo-Victorian, and thoroughly un-Marxist one. Also poorly understood in the West have been the problems of the Soviet family. As Geiger notes, "the less attractive, more disorganized aspects of Soviet life are in the main thoroughly camouflaged by official policy and cant." Such problems include marital instability, juvenile delinquency, the conflict of generations, the surplus of women, and a social type identified by the author as a male with a damaged personality.

The book shows that the Soviet family is on the whole quite vigorous and "coexisting" with the regime in a "peaceful-antagonistic" manner. Its survival, however, provides no proof of the indestructibility of the institution, since (as also noted by Barrington Moore) the regime has never made a sustained effort to destroy it, being content with neutralizing and silencing it as an agent of political socialization.

This book is valuable not only as a careful and insightful study of a particular institution. It also brilliantly illuminates Soviet society as a whole. Although sociologists treat the interrelationships of all social institutions as axiomatic (and in particular the linkages between the family and the rest), translating such axioms into a tight, well-written study is an admirable accomplishment.

Soviet Change in Soviet Russia is a collection of twenty-one articles and papers written between 1949 and 1967. Most were written in the first part of the 1950s; four, since 1960. They encompass a remarkable diversity of subjects, ignoring hardly any important area of Soviet life or major sociological concern. The papers deal with social change, stratification, the family, modal personality, ethnic groups, religion, occupational prestige, propaganda, public opinion, and mass media, as well as with comparative and theoretical perspectives. They reflect the author's wide, though basically stable and long-standing, interests in both Soviet society and general sociology. Many of the articles have been somewhat updated, but most are reprinted as they appeared originally, for partly didactic reasons explained in the preface. They have certainly stood the test of time, and, if some of them have aged a bit, they have done so gracefully. There is very little, if anything, that could embarrass Inkeles today. His views, predictions, and judgments of ten, fifteen, and almost twenty years ago still hold up. Such resistance to scholarly obsolescence (the ravages of which are all too evident in much of modern sociological writing) deserves comment. Two explanations suggest themselves. One is that the author did sound research and drew farsighted, enduring conclusions from the information at his disposal. Another explanation might be that Soviet society has, after all, not changed as fast and as radically since the mid-1950s as many observers have thought.

The highlights of the volume are classics of the literature and will be familiar to all students of Soviet affairs. They include, among others, "The Totalitarian Mystique . . . ," "Social Stratification and Mobility in the Soviet Union," "Russia and the United States . . . ," and, among the more recent ones, the much-quoted "Models and Issues in the Analysis of Soviet Society."

The most recent piece in the volume, "Fifty Years of the Soviet Revolution," deserves special mention not only because it reflects the author's latest (1967) thinking about Soviet society. In this paper, Inkeles also provides a fine example of how to combine value judgment with sound analysis, an even-handed stocktaking of failures and achievements, and well-aimed social criticism. He shows that just moral indignation is compatible with rational evaluation and that a strong commitment to moral-ethical standards need not degenerate into either sloganeering or anti-intellectualism. This is a timely example when some American sociologists are in the process of overreacting to the unrealistic doctrine of "value neutrality" to which generations of American sociologists paid allegiance or at least lip service. Inkeles does not pretend to such superhuman attitudes of detachment, but neither do his commitments force upon him double standards, as happens not infrequently to the strongly committed. Indeed, he who would reproach him or any other specialist critical of Soviet society should bear in mind how he might react if someone condemned the student who is critical of American society.

The volume is coherent despite the diversity of topics and dates at which

the parts were written. Some of this is accomplished by the succinct introductions to each of the seven parts of the book. But the deeper source of this unity is the interaction among the three theoretical perspectives which pervade the volume, the models of a totalitarian, industrial, and developing society—in spite of some mild misgivings of the author (see p. 432) about the feasibility or general desirability of such combinations.

In his 1966 article concerned with theoretical models (of Soviet society), Inkeles expressed qualified reservations about the continued usefulness of the totalitarian model. Without advocating its complete rejection, he suggested a fresh look at Soviet society through the concepts of developing and/or industrial society. Since his article was written, developments in the USSR have gone a long way toward rescuing the concept of totalitarianism from obsolescence or oblivion. Naturally, as Inkeles argues, there are many things in Soviet society that totalitarianism will neither explain nor illuminate. At the same time it must be stressed that there is no inherent conflict—either theoretical or psychological—in depicting Soviet society as *both* totalitarian and industrial (or totalitarian *and* developing). This is precisely what comes across from this volume as a whole (even if individual chapters emphasize one or the other dimension), and this is one of its distinctive accomplishments.

These papers show that not only has Inkeles retained his grasp on Soviet affairs but that he probably also remains the most knowledgeable and insightful American sociologist writing on Soviet society.

Social Thought in the Soviet Union. Edited by Alex Simirenko. Chicago: Quadrangle Books, 1969. Pp. ii+439. $14.95.

George Fischer

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This is the most comprehensive attempt to date to survey all of post-Stalin social science in the USSR, "the formal side of current Soviet social thought" (p. v). The volume consists of specialized essays by Western (mainly American) scholars in no less than eleven disciplines: anthropology, economics, education, history, law, linguistics, philosophy, political science, psychiatry, psychology, and sociology. The volume also contains a general essay on "Soviet Marxism and Social Science" and an introduction by the editor, a sociologist at the University of Nevada.

Of course, the contributions to this volume vary as much in their content as do the fields dealt with. But one question should be asked of the whole collection. Just how much change has in fact taken place in the Soviet social sciences in the nearly two decades since the death of Stalin, and especially in the 1960s?

This question seems more appropriate now than a few years ago. At that time, all of the social sciences were making some big strides by contrast with the devastation and atrophy that stood out in the age of Stalin. The worst abuses of the cult of personality were cast off in the sixties, and the isolation from scholarship and scholars abroad lessened. By now, however, the process of "revival," as the editor of this volume calls it, has been going on for some time. That is why it makes good sense to ask now: what does the revival of the sixties add up to?

The contributors to *Social Thought in the Soviet Union* differ in how they answer the question. For example, on the key fields of philosophy and history, respectively, Eugene Kamenka of Australian National University and Arthur P. Mandel of the University of Michigan suggest that not much progress has been made beyond a partial de-Stalinization of theory, staff, and the favored methods of training and research. In the case of economics and psychology, on the other hand, Howard J. Sherman of the University of California (Riverside) and John A. Molino of Columbia University see recent developments as rather impressive in the Soviet context. The essays on most of the other disciplines fall somewhere between these judgments.

Two of the most interesting essays in the volume are by Urie Bronfenbrenner of Cornell University, on education, and by Isidore Ziferstein, a Los Angeles psychoanalyst, on psychiatry. On sociology, the volume's editor, Alex Simirenko, argues that Soviet scholars in the field have recently made some contributions of international significance. He singles out historical analysis and research on the use of leisure time. Yet within the limits of a brief treatment of a few scholars (with all too much emphasis on a nonagenarian, S. G. Strumilin), this view does not seem to stand up.

In general, if one were to reconsider the post-Stalin new Soviet sociology as of the end of the 1960s, two trends stand out. Institutionally, a new set of able and change-oriented men are "making it" more and more in the field. This can be seen, symbolically and substantively, in the setting up of their own unit within the country's central scientific establishment, the Institute of Concrete Social Research. Intellectually, the other trend consists of a leveling off. After a spurt of books that portended a significant new beginning (notably studies by Grushin, Kon, Levada, Osipov, Rutkevich, Shubkin, Yadov, and Zdravomyslov), the published work appears less innovative. It now seems, in retrospect, that, at least in this field, the "revival" was a thing of the sixties. In different ways, two new works bear out this view: *Town, Country and People*, volume 2 of *Studies of Soviet Society*, a collection of essays edited by Gennadi V. Osipov, president of the Soviet Sociological Association (London: Tavistock; New York: Barnes & Noble, 1969); and John Shippee's essay on empirical sociology in the Soviet Union and Eastern Europe, in *Communist Party-States*, edited by Jan F. Triska (Indianapolis: Bobbs-Merrill, 1969).

In all, the contributors answer with reserve the question raised in this review. Time and again, they point to a growth of professionalism, scholarly controversy, empirical research with technical sophistication. But they also stress, as Donald D. Barry of Lehigh University does about Soviet scholarship in law, "the attempt at a high level of coordination and control of research by the authorities; a consequent research orientation best described as 'practical empiricism' (in the words of Merton and Riecken), designed to aid in the solution of practical problems; a relatively low level of respect for research having no direct and obvious connection with such problems" (p. 184). And none of the contributors states that this or that social science has had a major breakthrough or has done something of general scientific import.

Welcome and potentially important though the revival of the 1960s has been, *Social Thought in the Soviet Union* and other evidence make it appear valid now to add a note of caution. The revival is not apt to bring forth notable results, or big new ideas, until the setting changes even more. As it

is the powers that be still force scholars to treat as a given either the status quo or a set, doctrine-deduced scheme for social change.

In the United States, by comparison, we tend to pride ourselves that no such outside force molds scholarship, or at least our own work. Yet today most established social scientists take the status quo for granted, and all too many critics assume some set scheme for social change. Insofar as large steps forward take the form of scientific revolutions, and not of work within a given paradigm, one superpower may now show little more progress in social science than the other.

The Logic of Survey Analysis. By Morris Rosenberg. New York: Basic Books, 1968. Pp. 288. $6.95.

Seymour Sudman

University of Illinois, Urbana

In *The Logic of Survey Analysis*, Morris Rosenberg has produced a thorough, well-organized introduction to the basic question: Given a relationship between two variables, what can be learned by introducing a third variable into the analysis? Students new to survey analysis will find this book invaluable, although the experienced research analyst will probably find it too simple.

The student will probably find the final two chapters on the strategy of survey analysis most useful and might well read them first (as suggested in the perceptive foreword by Paul Lazarsfeld). In them, Rosenberg warns against rigid hypothesis testing and urges that the analyst be aware of the possibilities of what Selvin and Stuart have called data dredging, "the hot pursuit of an idea down paths and byways which have little to do with one's original hypotheses."

In the other chapters, Rosenberg discusses the possible outcomes of analysis. The examples are copious and generally well chosen. Chapter 2 deals with extraneous and component variables. Chapter 3 discusses intervening and antecedent variables, first separately and then in combination with extraneous variables. Chapter 4 concerns suppressor and distorter variables. Here there is a useful discussion of the importance of negative findings.

In chapters 5 and 6 there is a detailed discussion of conditional relationships. Rosenberg's illustrations show that conditional relationships may either strengthen or weaken initial interpretations, or may modify them. The three major types of conditional analysis are specification of the conditions facilitating or inhibiting a relationship, clarification of the nature of the variables, and making descriptive statements more exact. The individual chapters are well arranged, and the descriptive headings of the sections make it easy for the reader to follow the logic. Finally, for the beginner, the appendices contain sections on basic principles of table reading and the arithmetic of control.

Readers at a more advanced level will probably be impatient with the repetition and unhappy with the statistical naïveté. In his preface, the author states that no knowledge of statistics beyond the ability to add up to 100 percent is required to follow the discussion. When he deviates from this at a few points in the book to use statistical analysis, the analysis is fuzzy

or misleading. Thus, in discussing the use of suppressor variables he uses change in level of significance of a difference, from the .20 level to .05 level, as indicating the degree of effectiveness of the supressor variable, a distortion of the meaning of significance testing. A rank order correlation of zero is cited as evidence that clearly disproves that a relationship exists, ignoring the possibility of a nonlinear relationship. In a discussion of a series of relationships all significant at the .10 level of confidence, he states that one's confidence in each of the empirical relationships would thus be low, but one's confidence in the theoretical generalization might be fairly high; no mention is made of the possibility of combining independent tests of significance or of the use of simple sign tests when one group is higher than another in fifteen of sixteen comparisons. The student who, after reading Rosenberg, wishes an introduction to statistical procedures of survey analysis would probably find Hirschi and Selvin's *Delinquency Research* highly useful and much more sophisticated.

There is one shortcoming of the book that will be especially troublesome for the beginner. There is no good discussion of when the analysis of a body of data should stop. While premature closure is undesirable, there must come a time when the "hot pursuit of an idea down paths and byways" must cease or at least pause if anything is to be written and made available to one's colleagues. At some point, it will be easier and less costly to get some new data that pertain directly to an issue that has been uncovered than to attempt to tease it out by complex analysis from data designed for another purpose entirely. This will be an especially severe problem if the study under analysis is large and complex originally. The neophyte may then find himself to be a sorcerer's apprentice. He knows the magic to start the analysis but has not yet learned how to turn it off to keep from being drowned.

Ultimately, however, a book must be judged, not on what it omits, but on how well it meets the goals it sets for itself. As indicated in the title, the chief concern of this book is in the reasoning behind analysis. In this area, the book is a major achievement.

The Logic of Social Inquiry. By Scott Greer. Chicago: Aldine Publishing Co., 1969. Pp. xii+232. $5.95.

The Social Reality of Scientific Myth. Edited by Kalman H. Silvert. New York: American Universities Field Staff, 1969. Pp. 239. $7.50.

Harold Fallding

University of Waterloo, Canada

One is naturally tempted to compare Scott Greer's new book with Quentin Gibson's book of 1960. Except that they exercise their spelling option differently, the two authors use the same title (see Quentin Gibson, *The Logic of Social Enquiry* [London: Routledge & Kegan Paul, 1960]). One would not judge either book simply by this comparison. Yet it does serve to focus the vague dissatisfaction one experiences in reading Greer. The dissatisfaction comes from the fact that the book itself is not focused. Whereas Gibson's book is focused by its unfolding argument, Greer's is a scattered and discursive book—almost conversational. There is no doubt that Greer's book is engaging because of its perceptiveness and style. But, when everything is

said, what we have is a series of penetrating aperçus, pithily and wittily expressed; and the volume consists, strictly speaking, of seventeen papers, roughly sorted into four bundles. Not that there would be anything wrong with that if it were frankly presented. But we are led to expect more than we really get.

Unlike Gibson, Greer does not lead us to the frontier of knowledge by an exhaustive examination of cardinal issues. He does, however, cover quite a range of the standard issues and has a considered and interesting opinion on each one. He offers these as opinions of a seasoned practitioner in social science. As such, they should help to make more sophisticates in the profession by showing students what abysses yawn below their conventions. Through this vein of experience, Greer's opinions have a root in the sociological enterprise that Gibson's discussion lacks—so the advantages in this comparison are not all on one side.

Greer disarms the debunker of a science of society by showing that it makes only one abstraction out of human experience. He puts a brake on the over-eager quantifier by pointing out that only inherently measurable things can be quantified, and that sociologists have not come any closer to real science when they have used purely "rhetorical" numbers. He shows how the power of logic is confined to the drawing out of implications, and how that of mathematics depends on the coincidence of finding a correspondence between its forms and forms in the real world; that the core concepts of theory are really metaphors by which we conceive of strange things through their resemblance to familiar things; that normative theory which presumes to give directives cannot arise from purely empirical theory; how social science can be over-estimated by practical men in a hurry to apply it, and that the scientist can get protection by protesting his poverty and by asking if he may *learn* by looking into the outcomes of policies that are applied; that C. P. Snow is misled in naming only two (and disparate) cultures, the scientific and humanistic, for social science makes a third culture and can mediate between them. There is much more—these are but a few of the questions that Greer ventilates with skill. And in thus employing his talents he has provided reading of the kind that every apprentice of social science will definitely need to have.

The Social Reality of Scientific Myth is a book of a different kind. The title is unnecessarily grandiose and quite misleading: the book does not treat that question in a general and systematic way. It is a collection of papers by different authors presented to a conference on science and social change in developing societies, and it has the diffuseness of such books. (It is the fourth in a series produced by the American Universities Field Staff.) Yet, although a very different book from Greer's, it illustrates some of the problems he discusses. It comes to us from a group of people aiming to throw light on an applied field but nevertheless seeking to exploit their situation to contribute to systematic sociology in some way. As Kalman Silvert says in his foreword, in this as in the previous studies, the hope was "to make a contribution to social science theory by following a comparative institutional tack" (p. 3).

First come three papers treating general questions: one by Carl H. Hamburg on the meanings of the term "science," one by Louis Morton on military technology and social change, and one by Charles F. Gallagher on the differential capacity of different languages to facilitate the development of

science. A set of case studies follows, examining the problems of particular countries. James W. Rowe reports on the growth of science and technology in Brazil. Nicholas DeWitt evaluates science education in Africa and also looks into the prosecution of science in the Soviet Union. E. A. Bayne analyzes technological growth and scientific lag in Iran. F. Roy Lockheimer traces the influence on science of Japanese governmental policy. Geoffrey Oldham compares the development of science in England and mainland China.

It would be hard for anyone to draw theoretical conclusions from papers on such widely differing topics, for they are not directed to a unifying intellectual question. Yet, in his "Conclusions," Silvert has valiantly made the attempt. He believes the papers show that technology and science are to be clearly distinguished from one another. The former occurs at all times and places, being an integral part of human adaptation. The latter occurs only in societies having the kinds of conditions that have obtained in the West since the seventeenth century. Societies without these conditions may ape science for a time but cannot sustain a long-run autonomous scientific enterprise.

It is clear that, in spite of some hesitation, Silvert thinks the whole importance of knowing this derives from a belief that a scientific enterprise is necessary to the good society and to good government. Unfortunately, the truth of this belief is not demonstrated. and his relative silence on the matter is a great deficiency of the book. Not that one would expect these more imponderable things to be demonstrated with the conclusiveness possible in more mundane matters. But they could have been frankly opened up.

The Search for an Abortionist. By Nancy Howell Lee. Chicago: University of Chicago Press, 1969. Pp. xv + 207. $7.50. 67*s.* 6*d.*

Wyatt C. Jones
Brandeis University

I feel about this study somewhat as Samuel Johnson did about the Quaker woman preacher whom he traveled to Brighton to hear. When asked by Boswell how he liked her, Dr. Johnson replied that she reminded him of the little dog he saw on the train going down who could walk on his hind legs. "Not that she did it well but just that she did it at all."

Mrs. Nancy H. Lee has shown imagination and persistence in collecting this series of interviews and questionnaire responses from 114 women who underwent abortions. They are in no sense a sample, and the author correctly draws no generalizations from the data. However, there are a number of interesting insights into the operation of this "invisible" service (qualifications of abortionists, methods used, fees paid, etc.) and the complex pathways by which an acceptable abortionist was located. Both substantive and methodological interest centers in the operation of informal communication networks of friends and acquaintances who shared in this search. These 114 women knew of 1,189 other cases of abortion (214 asked them for help, 480 told them about it, and 709 were known by secondhand report). They, in turn, told 2,577 others of their condition (467 during the decision-making phase, 778 during the research phase, and 1,332 after the abortion). If the "gossip ratio" found to exist between the number of women

who told Mrs. Lee's subjects of their abortions and the number heard about secondhand is applied to each case and summed, the projected number who knew of these abortions is 6,014. While most of these women told fewer than twenty persons of their experience, it is estimated that approximately 8,000 have heard about it.

Although very little choice was exercised by these women, they managed to locate about 310 different abortionists. Mrs. Lee has also identified a new community role, the abortion specialist, a self-appointed informant who is familiar with the resources available—one individual uncovered in this study knew of twenty-five practicing abortionists.

While this research compares well with most studies of unmarried mothers and other stigmatized deviant groups, it also suffers from the same methodological problems of sampling bias, self-selection, and unrepresentative respondents. Only a longitudinal study of a large cohort sample will begin to unravel the tangled skein of causation and suggest appropriate solutions.

Why People Go to Psychiatrists. By Charles Kadushin. New York: Atherton Press, 1969. Pp. x + 373. $8.95.

Odin W. Anderson

University of Chicago

This is a research report of a detailed cross-sectional survey of 1,452 applicants to ten psychiatric clinics in New York City during 1959–60. Information was collected by means of questionnaires, interviews, and clinic records. Inquiries were made at the time the patient first applied for treatment in order to ask the "why" of application before therapy, thus avoiding memory contamination during and after therapy. Records alone were inadequate for this type of investigation. The study was carefully conducted in a complicated and sensitive research situation. The questionnaire is included in the appendix. The bibliography appears to be well selected and elaborate. The index is well constructed.

The analytical framework is imaginative; the findings flow directly from this framework; the interpretations and insights are revealing and far reaching; the recommendations for action are realistic and therefore appropriately modest.

The author feels that there are so many psychiatric clinics in New York City that the patients select the clinics rather than the reverse, as would be true in a smaller city with few clinics. The ten clinics selected for study of their applicants were of three types; psychoanalytic, religiopsychiatric, and hospital. Each has a different organizational perspective and a different type of clientele. Analytic clinics are mainly concerned with training new psychoanalysts. A religiopsychiatric clinic is much like an analytic clinic, but the trainees are ministers. Hospital psychiatric clinics are outpatient services connected with large hospitals. A great variety of cross-classifications by age, sex, social class, cultural and psychiatric sophistication, and psychiatric diagnoses are made, revealing the elaborate sifting process that takes place among psychiatric patients in a large city with many clinics. For those who are more or less acquainted with the field, the patterns are not particularly startling, but they do provide hitherto lacking

ecure evidence for social psychiatry. I was particularly struck by the for- nulation of the concept "Friends and Supporters of Psychotherapy," a ictional name but a real group of people who shared certain values, per- onal problems, and cultural affinities and hence formed a persistent isychiatric substratum in the community. By a method the author calls 'latent class analysis," using a computer, it was determined that 39 percent f the applicants belonged to the Friends and Supporters of Psychotherapy nd by definition constituted the cultural and psychiatric sophisticates in he study group.

The study shows that the socially structured pattern of patient recruit- nent of psychotherapy affects the type of problems that enter psycho- herapy. There are at least three "social" factors in the selection process n the part of the clinics: theoretical psychiatric orientation, routinization f the classificatory vocabulary, and the administrative need of the clinic. ower-class patients are more likely to report physical symptoms as a nask for psychological symptoms; upper class patients are more likely to eport psychological symptoms. Even though there are over seventy psy- hiatric diagnoses available, each clinic makes use of only a few. As the uthor writes: "No one can remember and properly apply such a large set f concepts, so the selection of a limited number makes life easier. The uidelines for this routinization are largely social" (p. 126). The author vrites that neither the differences in the patients' problems nor their social ackgrounds systematically explain the wide variability of diagnoses. There- ore, the very nature and the theory of diagnoses must be examined.

In this connection the author then attacks the medical model of illness vhich assumes that physicians can distinguish between those who are nentally well and those who have varying degrees of mental illness and, urther, that specific disease entities can be expressed in standardized liagnostic vocabulary. This study has tried to show "that psychiatrists lo not at present have an adequate means for sorting patients into any set f categories, much less deciding who is sick and who is not" (p. 326). Another assumption of the medical model, that the more medically ill are nore likely to seek treatment, is wrong because the psychiatrically sophis- icated, not necessarily those more in need of treatment, were more likely o apply for psychotherapy.

Much as I admire this study and the way it is reported, I must admit to eeling dizzy at times with the number of variables, feelings, and insights hat the author tried to wrestle with. I refer particularly to what seems to e a tortuous chapter 7, entitled "The Effect of Sophistication, Training, and Social Reality on the Presentation of Self." I would suppose certain emperaments are more congenial with this type of speculation than mine. I would hardly deny the usefulness of the chapter, and I tend to admire hose who can go forth into the quagmire the way Kadushin can. The aving grace is his scientific tentativeness as illustrated in observations he makes at the beginning and end of the book, respectively: "People do not go to psychiatrists because they are 'really sick'; they go because they *hink* [author's emphasis] they are sick and even this does not fully explain heir action" (p. 7). And, "the decision to go to a psychiatrist or a psy- chiatric clinic is most complex" (p. 307). This book is a fine contribution to empirical research in social psychiatry.

Two against One: Coalitions in Triads. By Theodore Caplow. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968. Pp. viii + 183. $6.95.

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Except for one point, it is difficult to criticize this superb book. I do feel some malaise regarding the concluding chapter, "The March of History," which attempts on a grand scale to analyze revolutionary movements as though they were all of the classical variety, employing the theoretical orientation carefully developed throughout *Two against One* to situations where the theory may not necessarily fit. Nevertheless, the inspirational basis for what some would call an "overgeneralization" reveals an insight that deserves commendation in spite of whatever shortcomings it may have produced.

The book itself is about triads and how coalitions are formed within them. The review of the literature is complete and exhaustive. The author's principal thesis—that the formation of coalitions in triads follows the same principles when we study three-person groups as it follows in the examination of the behavior of nation states—is at least provocative and at most instructive. Only Theodore M. Mills (*The Sociology of Small Groups*) probably knows as much about triads as Caplow, although the forthcoming effort by Robert F. Bales, *Personality and Interpersonal Behavior*, may also prove to be a useful adjunct to the study of triads, among other things. The six-volume series currently being published by the Academic Press, "Advances in Experimental Social Psychology," will undoubtedly also contain relevant, recent experimental work with triads. The genius of Caplow is perhaps best illustrated by his eighth chapter, "The Motives of Hamlet." In spite of his own expressed doubts regarding the contribution such an analysis might have for either a theory of triads or an understanding of drama, his efforts overcome these doubts with a style that is rare among academicians and even rarer among sociologists. This work is certainly to be recommended.

Immigrants in Industry. By Sheila Patterson. London: Oxford University Press, 1968. Pp. xix + 425. $7.00.

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Since World War II, Great Britain has served as host country to many immigrants of various ethnic origins. The result is that today it is one of the most heterogeneous of nation states. In general, immigrants to Great Britain may be grouped into five categories as follows: (1) European refugees and exiles (mainly Poles and Hungarians), (2) European economic immigrants (Austrians, Dutch, Germans, Italians, Scandinavians, and a few people from other Western European countries), (3) southern Irish immigrants, (4) Commonwealth economic immigrants (West Indians from Jamaica and Barbados, Anglo-Indians, Indians, Pakistani, and West Africans), and (5) other Commonwealth and nonwhite immigrants (Cape Coloureds, Anglo-Burmese, Anglo-Egyptians, Anglo-Ceylonese, Gibraltese,

Maltese, and Cypriots). Relations between members of the host society and the new arrivals have frequently been strained, and the white population of Great Britain has proved itself to be quite racist. Mounting tensions between whites and nonwhites led to the passage of the Commonwealth Immigrants Act of 1962 and subsequent additional controls on immigration. By 1967, however, the Home Office estimated that there were at least one million nonwhite immigrants resident in the United Kingdom.

Sheila Patterson, a social anthropologist who has made studies of minorities and immigrants in Canada, Great Britain, and South Africa, studied the absorption of immigrants into industry in Croydon, a borough south of London. Croydon, which has subsequently been incorporated into Greater London, had a population of 250,000 at the time of the study (1958–59), and each of the various ethnic groups was represented in its population. The industrial area of Croydon included some 3,000 establishments, including those engaged in heavy and light engineering, public transport, public utilities, food and drink production, automobile service and distribution, and printing and bookbinding.

The study which resulted in the book reviewed here focused on eighty-eight of the ninety-eight firms employing more than 100 workers. The purpose of the study was "to find out in what industries and what kinds of work the newcomers were to be found; what were their aptitudes, qualifications, and aspirations; what sort of relationships they were establishing with local employers and workers; how far the processes of absorption had gone for various groups; and what were the major factors which had influenced these processes" (p. 5).

As a means of accomplishing this task the author interviewed various representatives of management, such as personnel officers, works managers, and managing directors. While it is no doubt true that the process of absorption is to a great degree determined by the attitudes of management and its representatives, it is difficult, if not impossible, to measure the aspirations of immigrants without questioning the people involved. Furthermore, it is doubtful whether an objective picture of the absorption process can be obtained from management sources. This is especially true in regard to nonwhite workers, who were often characterized by officials as being "hypersensitive" and "touchy." Such attributes were frequently cited as being impediments to their absorption by the same officials who referred to them as "darkies," "niggers," "jolly black niggers," "black nigger types," and so on.

Representatives of management readily expressed a wide range of stereotypes about nonwhite workers. Examples follow: "They're best treated as grown-up children." "They have the natural darkie slowness." "I attribute the West Indians' superior know how to the fact that they have a lot of white blood." "Do they really have tails . . . or do they cut them off before they come?" "Fundamentally they are all children compared with our centuries of civilization." Favorable attitudes expressed by officials were the exception. Such negative attitudes are likely to impede the process of absorption, for the individuals who hold them are likely to translate them into discriminatory behavior and are unlikely to be objective about the immigrants' aptitudes and qualifications. While the report of this study no doubt provides a partial assessment of the absorption of immigrants into industry in Croydon (and perhaps all of Great Britain), it hardly tells the whole story.

Applying a useful three-phase typology of immigrant absorption—accommodation, assimilation, pluralistic integration—the author concludes that, with 2,000 immigrants in the firms she studied, the process of industrial absorption in Croydon is underway. Clearly some immigrants are further along the scale than others, and, as might be expected, race plays an important role in the process. While other factors such as length of time in Great Britain, cultural similarity, education, and the needs of the labor market affect the process, race plays a crucial role in British life. A reasonably well-defined hierarchy appears to exist, with Europeans at the top, followed by Anglo-Indians, Asians, West Indians, and West Africans, in roughly that order of social acceptance.

Given this situation, and the present mood of members of minorities throughout the world, it can be expected that race friction in Great Britain will continue for some time to come. This study was sponsored by and published for the Institute of Race Relations. In addition to enumerating some of the problems immigrants face in becoming absorbed into British industry, it provides a penetrating picture of the racist character of British society. Indeed, it is as a study of race relations in Great Britain that it makes its greatest contribution.

One final comment. Although the last one-fourth of this book is devoted to detailed studies of selected firms in Croydon, the book is entirely too long, and the data are presented in too much detail. While much of the material may be of interest to residents of Croydon, most other readers are not likely to find it informative.

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School Integration and Occupational Achievement of Negroes[1]

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American Negroes who attend integrated public schools have better jobs and higher incomes throughout at least the next three decades of their life. The differences in income cannot be accounted for by the higher educational attainment of alumni of integrated schools, or by the higher differences in social background. The most significant effect of integrated schooling is probably not "educational." It is probably more important that Negroes who attend integrated schools will have more contact with whites as adults, and tend to have more trust in whites than do Negroes from segregated schools. This in turn partially overcomes a crucial barrier to equal opportunity—the fact that information about employment opportunities is spread through types of informal social contacts to which few Negroes have access.

Much has been written about Negro poverty and its roots in the Negro's lack of skills and in racial discrimination. But even if all Negroes had skills and there were no discrimination, the segregation of Negroes, residentially and socially, would lower their incomes, simply because Negroes would continue to be denied access to a valuable resource—information about employment opportunities.

American Negroes live in a society which is largely segregated. In this society, there are whole occupations and industries which have very few Negro workers. Sometimes this is due to historical accident; the industry is located in a region which has few Negroes, for example. In other instances their absence is due to discrimination, sometimes subtle and sometimes not, or it is simply because Negroes do not apply for these jobs. In many cases, they do not apply because they do not know when a job becomes open. It is a common observation that one of the most significant forms of unfair employment practice is the hiring of new employees from referrals made by the present staff; if the staff is all white, the persons who apply will be friends, relatives, and neighbors who are also white. The employer who advertises publicly for help must bear the costs of interviewing large numbers of applicants and must depend only upon the application blank in making a decision. If there is a demand for that type of employment, he is wasting money by advertising when he can staff his plant without doing so. The best jobs are, therefore, not advertised. Even if the employer does ad-

[1] This study was carried out under contract with the U.S. Civil Rights Commission. The study was designed and data gathered by the National Opinion Research Center. The advice and assistance of Paul Siegel, Peter H. Rossi, Thomas Pettigrew, David Klassen, Judith Favia, and Narindar Kelly are gratefully acknowledged. The analysis is solely the author's and of course does not reflect the views of the Commission.

vertise publicly, the advantage lies with persons who have some knowledge of the kind of work, the nature of the qualifications, etc.; friends, neighbors, and relatives of present employees still have the inside track.

In a segregated community, Negroes must depend upon other Negroes for information about job opportunities. If Negroes are segregated into low-paying employment, they will, of course, have limited knowledge of better-paying opportunities. As Sheppard and Belitsky (1967) observe, for the poor to depend upon friends and relatives is rather like "the blind leading the blind."

Even in those areas where discrimination seems unimportant, segregation plays an important role in restricting Negro achievement. The Negro physician may feel that he had the same opportunities as his white colleagues, but if he had an all-Negro practice, his clientele probably lacks the money to provide him with an equivalent income. The physician with a racially segregated, poor clientele fares badly for essentially the same reasons as does a physician serving a geographically segregated, depressed community in Appalachia.

Thus we are arguing that occupational opportunities for Negroes will be limited until there is at least partial racial assimilation—until Negroes have sufficient contact with whites to learn about job opportunities and obtain referrals from white employees. There are numerous barriers to this kind of assimilation. The most obvious one is the amount of prejudice of whites toward Negroes and of Negroes toward whites. But even if there were no personal prejudice, the present patterns of racial segregation in social relations and in housing could persist through inertia, and continue to limit sharply the occupational achievement of Negroes for many years.

SCHOOL INTEGRATION

The public school is an important factor in the process of assimilation. Negroes who have attended integrated schools continue to have a large number of white friends as adults; they are more likely to live in integrated neighborhoods, to favor integrated schooling for their children, and to prefer belonging to integrated voluntary organizations (Crain, forthcoming). This means they will have greater opportunities to move into a biracial employment market rather than being restricted to the traditional ghetto employers. Hence, Negroes who attended integrated schools should have less-traditional patterns of employment and, as a consequence, higher occupational prestige and income. In order to substantiate this argument, we will present data showing that (*a*) Negroes from integrated schools are more likely to hold "nontraditional" jobs—jobs which have relatively few Negroes in them, (*b*) Negroes in nontraditional jobs will earn more money than those in traditional jobs, hence (*c*) Negroes from integrated schools will have higher incomes, and (*d*) Negroes with white friendships will have access to information about the labor market which they can use to obtain these nontraditional jobs, hence (*e*) Negroes from integrated schools will

have more knowledge about jobs. We shall present the findings separately for each sex; the pattern is somewhat different for males and females.

Data to establish these five points are drawn from a 1966 survey of Negroes, aged twenty-one to forty-five, living in the metropolitan areas of the North. The sample was weighted to overrepresent Negroes in higher-income neighborhoods and in the smaller metropolitan areas; the tables are hence weighted to reflect the actual population. The truė number of cases is approximately 40 percent of the weighted *N*s shown in the tables. Interviewing was conducted by an all-Negro staff.

Block quota sampling was used; normally, this procedure slightly underrepresents low-status persons, and this seems to be the case here. Of the male sample, 22 percent never attended high school; we estimate that the true percentage in the universe may be as high as 25. In the sample, 10 percent of the men are professional or managerial, which is the same as the census data for the 1960 northern urban male nonwhite population. In 1960, 18 percent of the male universe were laborers; this sample produces only 12 percent. This is the greatest discrepancy between the sample and the census; part of this difference is due to change in the economy between 1960 and 1966.

The original sample was 1,624 cases and the weighted *N* is 4,153; we will focus largely upon that one-third of the sample which attended northern high schools and who report an occupation; this is 1,231 weighted cases.

INTEGRATION AND NONTRADITIONAL EMPLOYMENT

Table 1 records the percentage of Negroes for each of the eight major urban occupational groups in the 1960 census and the percentage of alumni of integrated high schools and of segregated high schools in each of these occupations. Negro men tend to be concentrated in the lower blue-collar occupations—operatives, service workers, laborers—and in the lowest of the white-collar occupations—clerical work. Conversely, Negro men tend not to be professionals, managers, salesworkers, or craftsmen, hence, we shall call these four major occupational groups nontraditional. Approximately one-third of the male Negro alumni of integrated high schools are in three nontraditional occupations: crafts, sales, and the professions, while only one-fifth of the Negroes who attended segregated schools are in these three groups. Male Negro managers, owners, and proprietors tend to come from segregated schools, but contact with whites is not necessary to enter these occupations, since almost all Negro managers are in businesses serving largely Negro clientele. (If the data were available, we would hypothesize that Negro businessmen serving white clientele would be more likely to have had integrated schooling.)

Contrary to popular belief, Negroes who attended integrated schools do not come from higher-status or more stable families, and therefore these results do not change when background variables are introduced as controls. (We will demonstrate this for the relation of integration to income below.)

One reason Negro clerks are slightly more likely to be from segregated

schools is that Negro clerical positions are available in the largest met politan areas where there also is the largest number of segregated scho When city size is introduced as a control variable, the apparent predoı nance of men from segregated schools in clerical work becomes smaller.

Negro women from integrated schools are much more likely to enter professions. But otherwise, our thesis does not hold for women; Ne women from integrated schools are not more likely to have nontraditio jobs.

TABLE 1

OCCUPATIONS OF ALUMNI OF SEGREGATED AND INTEGRATED NORTHERN HIGH SCHOOLS, BY SEX, AND PERCENTAGE OF NEGROES IN EACH OCCUPATIONAL GROUP

Occupational Group	Males: High School Was Integrated (%)	Males: High School Was Segregated (%)	Males: Difference	Males: Negroes in Group (%)	Females: High School Was Integrated (%)	Females: High School Was Segregated (%)	Females: Difference	Females: Negr in Gro (%
Professional	11	8	+3	5 9*	14	4	+10	10 7
Managers, owners, proprietors	3	6	−3	4.2*	1	0	+ 1	5 3
Clerical	11	13	−2	11.3	22	32	−10	6 7
Sales	3	0	+3	4 7*	2	3	− 1	4 7
Craftsmen	19	13	+6	7 5*	2	2	0	11 4
Operatives	31	40	−9	14 3	22	21	+ 1	13 2
Service	15	10	+5	29 1	36	38	− 2	38 8
Labor	6	10	−4	27 4	0	0	...	32 7
Total	99	100			99	100		
N†	(498)	(227)			(372)	(134)		

NOTE.—Alumni of southern high schools excluded from this table.

* Indicates nontraditional occupation.

† Weighted; true N is approximately 0.4 times N shown for all tables.

The eight major occupational groups are broad categories, and we ca continue this investigation by looking at differences in the detailed occupa tional classifications within each major group. In table 2, we look withi each major occupational group and see that Negroes from integrate schools are more likely to hold those occupations whose work force is les than 3 percent Negro, which we shall define as nontraditional (U.S. Burea of the Census 1960, table 3, pp. 21–30). For example, 36 percent of Negr professionals from integrated schools are in the nontraditional profession compared with 33 percent of Negro professionals from northern segregate schools. (Of course, in table 1 we saw that Negroes from segregated school are less likely to be in the professions at all.) This is the smallest differenc in the table; the other differences are sharp even for such low-level em ployees as operatives and service workers.

We also see in table 2 that Negro women from integrated schools ar

more likely to hold nontraditional occupations in the professions, and in clerical and sales positions. There are no Negro female occupations in the general category of craftsmen, operatives, or service which are not more than 3 percent Negro. Managers, operators, proprietors, and laborers have been dropped from the table for both men and women because there is no classification of managers, etc., which is over 3 percent Negro and no classification of laborers which is under 3 percent Negro.

These two tables yield convincing evidence (at least for males) of our general point that Negro alumni of integrated schools are in "integrated" jobs. In table 3, we see that those respondents who hold these nontraditional occupations within each major census classification tend to have higher incomes. In the case of males, those in nontraditional occupations have noticeably higher incomes in all five test groups. However, the pattern for females is completely mixed, and apparently meaningless; for example, the very high correlation for Negro professional women is based almost entirely on the high income of Negro schoolteachers, a traditional occupation.

TABLE 2

PERCENTAGE OF RESPONDENTS FROM EACH MAJOR OCCUPATIONAL GROUP IN (DETAILED) OCCUPATIONS WHICH ARE LESS THAN 3 PERCENT NEGRO, BY INTEGRATION AND REGION OF HIGH SCHOOL, AND BY SEX (PERCENTAGE IN OCCUPATIONS LESS THAN 3 PERCENT NEGRO)

	Males			Females		
	High School Was			High School Was		
Major Occupational Group	North, Integrated (%)	North, Segregated (%)	South, Segregated (%)	North, Integrated (%)	North, Segregated (%)	South, Segregated (%)
Professional	36 (56)	33 (18)	31 (35)	8 (49)	0 (6)	0 (45)
Clerical, sales	19 (67)	13 (30)	30 (49)	58 (89)	43 (47)	58 (36)
Craftsmen	56 (93)	41 (29)	15 (113)	...	...	...
Operatives	4 (155)	0 (91)	0 (179)	...	...	...
Service	8 (76)	0 (22)	0 (51)	...	...	...

NOTE.—Sign test, differences among northern-educated respondents significant $p < .01$ (one-tailed).

One might argue that the Negroes in these nontraditional occupations are better qualified, and to some extent this is true. In table 4, we see that Negroes in nontraditional occupations tend to have higher educational attainment. However, observe that the association between education and nontraditionalism is weaker than the association between income and nontraditionalism; in table 4, γ is generally lower than in table 3. (Our measures of education and income are distributed through five categories with approximately the same marginals; therefore γ in both cases is comparable.)

In table 4, we again see no pattern for females. Those who have nontraditional occupations are not better educated. This is consistent with the idea that occupational discrimination and inequality is greater for Negro males than for Negro females.

It seems a reasonable assumption that discrimination against Negroes in employment and the higher salaries in occupations which have few Negroes is a result of competitive efforts on the part of white male employees to protect their economic situations (Hodge and Hodge 1965). If this is the case, then it seems reasonable that white women, as a class more preoccupied with family and less with occupational roles, would be less likely to press for a similar occupational pattern of discrimination against Negro women.

Even so, Negro women still benefit occupationally from integrated schooling, according to these data. There are too few cases to make a truly

TABLE 3

ASSOCIATION BETWEEN PERCENTAGE NEGRO (DETAILED OCCUPATIONAL CATEGORIES) AND INCOME, WITHIN MAJOR OCCUPATIONAL CATEGORIES, BY SEX

	Males		Females	
Occupational Categories	γ	Total N	γ	Total N
Professional	−.38	118	+ .42	108
Managers, owners, proprietors	*	50	+1.0	13
Clerical and sales	−.31	173	− .01	193
Craftsmen	−.21	303	+1.0	22
Operatives	−.03	623	+ .06	236
Service	− 65	209	+ .18	465
Laborers	*	195	*	3

* When the data are quartiled, there is no variance in male managerial occupations, which have few Negroes without exception, or in laboring occupations, all of which have many Negroes.

TABLE 4

ASSOCIATION BETWEEN PERCENTAGE NEGRO IN DETAILED OCCUPATIONAL CATEGORIES AND EDUCATION, WITHIN MAJOR CENSUS OCCUPATIONAL CATEGORIES, BY SEX

	Males		Females	
Major Category	γ	Total N	γ	Total N
Professional	− 15	118	+ 52	113
Managers, owners, proprietors	*	50	+1.00	13
Clerical and sales	− 41	177	− 12	204
Craftsmen	− 11	307	+ 07	28
Operatives	− 03	635	+ 01	251
Service	− 37	209	− 24	511
Labor	*	197	*	3

* When the data are quartiled, there is no variance in male managerial occupations, which have few Negroes without exception, or in laboring occupations, all of which have many Negroes.

firm statement, but table 1 shows the overwhelming majority of Negro professional women have been educated in integrated schools.

Tables 5 and 6 show that Negroes who attend integrated high schools have higher occupational prestige and higher incomes. (Data on income for women is not presented; since so many women work part-time, the results are difficult to interpret.) The occupational prestige effect is considerably stronger for women than for men. The differences for men do not reach the

TABLE 5

OCCUPATIONAL STATUS OF STUDENTS FROM INTEGRATED AND SEGREGATED HIGH SCHOOLS

Occupational Status	Region and Integration of High School: North, Integrated	North, Segregated	South, Segregated
Mean occupation prestige, men....	35.7	34.0	34.6
Standard deviation........	12.3	12 6	13.8
Total N....................	(489)	(229)	(494)
Mean occupation prestige, women..	36.1	31.3	31.6
Standard deviation........	13.9	12 6	16.3
Total N....................	(372)	(136)	(384)

NOTE.—Effect of integration for northern males N.S.; effect for females, $p < .01$ (one-tailed); occupational prestige scores developed at NORC by Robert W. Hodge, Paul M. Siegel, and Peter H. Rossi.

TABLE 6

MEDIAN INCOME OF ALUMNI OF SEGREGATED AND INTEGRATED HIGH SCHOOLS, FOR MALES

Sex	High School Is: North, Integrated	North, Segregated
Males.......	$5454 (493)	$5110 (247)

.05 level of significance, but they are in the predicted direction and are not small. The difference between the median annual income of alumni of integrated and segregated high schools is $344 per year for males. Some of this can be attributed to age (with the increasing number of segregated schools, young Negroes do not have as much opportunity for integration) but more than $200 difference remains after an age control has been introduced in table 7.[2]

[2] The summary statistic used in table 7 is a net partial difference formed by taking a weighted average of the differences across each row or column of the table.

There are only 300 male graduates of northern high schools in the sample, so it is not possible to estimate accurately the real dollar return resulting from an integrated education. The young Negro men from broken homes in this sample are more likely to have gone to integrated schools, and men from stable homes earn approximately $600 more per year when educational attainment, age, and high school integration are controlled. When family stability is introduced as a control, the effect of integration rises sharply, to $390.

Much of the income difference is due to the higher education of alumni of integrated schools. The average high school graduate, (including those with college) earns about $800 more per year than the average person who did not finish high school (again, controlling for integration, age, and family stability). Since 20 percent more students from integrated high schools graduate (Crain, forthcoming), we would expect the increased educational attainment to increase the income of alumni of integrated schools by about $200 per year. We have computed two estimates of the effect of integration independent of education in table 7. With only age as an additional control, we remove all of the effect of integration; but when we use family stability also, we have $210 remaining independent of education. Clearly, a larger sample is needed to make this estimate; but until one appears (which, we suspect, will not be soon) we must assume that integration has a net effect on income, independent of other variables including the higher educational attainment which also results from integration, of about $100 per year—not a small difference over the forty- to fifty-year working life of an adult male. Lifetime income of alumni of integrated schools is increased about $10,000; we estimate that only two-thirds of this amount is due to differences in educational attainment. Note that higher educational attainment is not a very parsimonious explanation of the fact that Negroes from integrated schools are more likely to work in nontraditional occupations. In the remainder of this paper we will argue that alumni of integrated

TABLE 7

INCOME OF ALUMNI OF SEGREGATED AND INTEGRATED HIGH SCHOOLS, FOR MALES, WITH BACKGROUND VARIABLES CONTROLLED

Additional Variables Included	Increase in Annual Income (Medians) Due to High School Integration for Males (Rounded to Ten-Dollar Units)
None	$ 340
Age	$ 220
Age, stability of family of origin	$ 390
Age, educational attainment	$− 40
Age, educational attainment, and stability of family of origin	$ 210

schools make more money because they are more likely to associate with whites; they have integrated jobs for the same reason they are more likely to live in integrated neighborhoods.

THE JOB-FINDING PROCESS

The findings of tables 5 and 6—that alumni of integrated schools have better jobs and earn more money—is reasonable if one assumes that having informal contacts into the white job market is the crucial factor. Tables 8-12 provide some evidence for this point of view. Table 8 gives the responses to the question, "How did you find your present (or last) job?" and

TABLE 8

ANSWERS TO QUESTION ON SOURCE OF PRESENT JOB

Source	National Sample (%)	Negro Sample (%)
Family	14	13
Friends	24	25
Union	1	3
Want ads	7	10
State employment	6	10
Private employment	4	7
Visiting prospects	24	18
Ask previous employer	2	2
High school	1	0
College	3	1
Other	16	10
Total	102	99
N	(566)*	(3,537)

* Unweighted *N* for national sample aged 21–45, who have worked within the past two years.

compares the responses of the Negroes in our northern metropolitan sample and those of a national sample. The similarities are more striking than the differences, and in general the results point up the importance of informal means of communication in the job hunt. On the whole, the findings are quite consistent with Sheppard and Belitsky's (1967) study on job seeking. Although only a little more than one-third of the respondents say that family or friends referred them to their present job, another one-quarter of the national sample and one-sixth of the Negro sample mentioned "visiting plants" as the way in which they found employment. This presumes that the respondent had some idea of what plants to visit; in a large city, this requires more than a casual knowledge of the labor market. The largest differences between the Negroes and the national sample are in this category. It may well be that Negroes anticipate discrimination and hence are less willing to make the grand tour of possible employers. Negroes use formal means of obtaining job referrals, such as the union, newspaper ad-

vertisements, and public or private employment services more than whites do and use family and friends as a referral method less often.

The next question is what kinds of persons are useful sources of information about jobs? In the absence of data, we will make two straightforward assumptions: first, we assume that better-educated persons are more valuable contacts, since they may have more general knowledge, more influence, or may know more precisely what management wants in the way of quali-

TABLE 9

PERCENTAGE OF RESPONDENTS WHO SAY THEY COULD SEEK ADVICE FROM A FRIEND WHO IS A COLLEGE GRADUATE, BY INTEGRATION OF HIGH SCHOOL, EDUCATIONAL ATTAINMENT, AND SEX

	Type of High School		
Sex	Northern, Integrated (%)	Northern, Segregated (%)	Southern, Segregated (%)
Males:			
No college	62 (354)	44 (212)	45 (427)
Some college or college graduate	82 (164)	85 (48)	75 (120)
Females:			
No college	47 (536)	33 (257)	35 (636)
Some college or college graduate	65 (130)	78 (56)	69 (147)

TABLE 10

KNOWLEDGE OF ANOTHER JOB OPPORTUNITY, BY SEX, EDUCATION, AND CONTACT WITH A COLLEGE GRADUATE (PERCENTAGE)

	Percentage Knowing of Another Job, by Education			
Sex and Contact with College Graduate	Eighth Grade	Some High School	High School Graduate	Attended College
Males:				
With college graduate contact	32 (217)	37 (414)	41 (365)	52 (332)
Without college graduate contact	29 (184)	17 (185)	21 (122)	... (30)
Difference	+ 3	+20	+20	...
Females:				
With college graduate contact	22 (148)	29 (459)	39 (437)	53 (297)
Without college graduate contact	20 (177)	19 (372)	24 (212)	... (58)
Difference	+ 2	+10	+15	...

NOTE.—Net effect of college graduate contact, among those with high school education or less: males, 15%; females, 10%.

fications. Second, we assume that whites know more about higher-paying jobs than Negroes do. Negroes who attend integrated schools are more likely to associate with whites in later life, and have a double advantage in that their contacts with whites also bring them into contact with persons who are better educated. Respondents were asked whether they could go for advice to a relative or friend who was a college graduate. (They were not asked, what race the relative or friend was.) Respondents who attended integrated

TABLE 11

CONTACTS WITH WHITES AND KNOWLEDGE OF ANOTHER JOB, BY SEX AND EDUCATION OF RESPONDENT (PERCENTAGE KNOWING OF ANOTHER JOB)

	Contact with Whites			
Sex and Education	Low (0)	(1–2)	(3–4)	High (5)
Men, high education	... (30)	55 (45)	20 (64)	52 (215)
Men, low education	24 (261)	25 (332)	32 (359)	29 (541)
Women, high education	... (30)	34 (64)	41 (58)	43 (203)
Women, low education	12 (444)	20 (487)	29 (386)	30 (488)

NOTE.—For men, net effect of contact with whites, independent of education = +4. For women, net effect of contact with whites, independent of education = +12.

TABLE 12

PERCENTAGE KNOWING OF ANOTHER JOB BY PRESENT CONTACT WITH WHITES, BY FREQUENCY OF FRIENDS' VISITS, AND BY SEX (PERCENTAGE NAMING ANOTHER EMPLOYER)

	Present Contact with Whites		
Frequency of Visits	Low	Medium	High
Males:			
Few days per week	34.9 (189)	33.8 (281)	38.3 (399)
Once per week	19.6 (112)	14.2 (134)	24.1 (170)
Less than once per week	33.0 (179)	30.5 (190)	39.6 (182)
Females:			
Few days per week	20.3 (301)	32.6 (276)	35.8 (338)
Once per week	13.8 (160)	27.1 (207)	28.6 (154)
Less than once per week	12.0 (249)	20.5 (273)	32.2 (208)

NOTE.—Net effects (first col. vs. third col.): For men, net effect of contact with whites, independent of visiting = +3%, net effect of visiting, independent of white contact = +1%. For women, net effect of contact with whites, independent of visiting = +17%, net effect of visiting, independent of white contact = +8%.

schools are not more likely to have relatives who are college graduates, but they are considerably more likely to have college-educated friends, as shown in table 9. In this table, there is essentially no difference among northern-educated respondents who had themselves attended college; in all cases, they were likely to have college-educated friends. Southern migrants are at a slight disadvantage here, possibly because they have migrated after completing their education and thus have left their college classmates behind. There is a slight tendency for females with some college education who attended segregated high schools to report more college-educated friends, but the number of such cases is tiny. When we turn to respondents who themselves did not attend college, we find that those who attended integrated high schools have very distinct advantages, while alumni of segregated northern high schools are no more likely to have a college-educated friend available than are migrants who attended southern high schools. Since alumni of integrated high schools have more white contacts, it seems safe to assume that many of these college graduate friends are white.

From this point, the chain of argument is supported indirectly by the evidence. We hypothesize that better-educated friends are more likely to know of job opportunities. This is supported by table 10, which shows that those respondents who do have college graduate contacts are considerably more likely to be able to name an employer who would hire them.[8] Notice that the differences are greater for respondents who themselves have some high school or are high school graduates. This is consistent with the possibility that college graduate contacts and other persons that these respondents could use for referrals would be more familiar with occupations requiring at least minimal educational qualifications. Or it may be that respondents with less than eighth-grade educations have access to low-status jobs which are easier to learn about, and which require fewer personal referrals.

Table 11 shows that respondents who have white friends know of more job opportunities than those with fewer white contacts. The results for males, however, are quite weak; the differences for females are considerably stronger. It is possible that Negroes with high levels of white contact are more gregarious in general, and the fact that their friends are white is irrelevant. Table 12 considers this argument by controlling on the response to, "How often do friends and relatives visit your home?" In general, contact with whites is a more important factor than total amount of home visiting. (We have no explanation for the curvilinear pattern for males in the effect of amount of visiting on knowledge of a job.)

Table 13 closes this part of the argument by showing that alumni of integrated schools are more likely to name a prospective employer. This is not the case for respondents under thirty; but the differences among older respondents are quite large for both sexes.

We have presented data showing that part of the effect of school integration on occupational achievement can be attributed to the effect of high

[8] The net partial percentage difference in table 10 is computed in the same manner as the net partial difference in medians (see n. 1).

contact with whites on job-seeking behavior. There are other effects as well; alumni of integrated schools are more likely to have attended college and score higher on an efficacy scale, which itself is associated with more aggressive job seeking. (Efficacious persons are more likely to know of another job, controlling for sex and educational attainment.)[4]

Both tables 11 and 13 indicate a stronger pattern of effects for females than for males. This is consistent with tables 5 and 6 which showed that the effects of school integration were generally more pronounced for females than for males. It is difficult to decide upon a convincing explanation for

TABLE 13

HIGH SCHOOL INTEGRATION AND KNOWLEDGE OF ANOTHER JOB BY AGE AND SEX OF RESPONDENT (PERCENTAGE NAMING ANOTHER EMPLOYER)

	High School Integration		
Age and Sex	North, Integrated	North, Segregated	South
Males:			
Under 30	38 (212)	38 (169)	38 (202)
30–39	46 (195)	10 (68)	30 (189)
40+	40 (106)	15 (27)	24 (152)
Females:			
Under 30	35 (306)	34 (174)	21 (248)
30–39	24 (237)	18 (78)	27 (317)
40+	30 (106)	19 (53)	20 (200)

this, but one possibility is that the good jobs for employed women are white-collar positions in small offices rather than in larger plants. Thus a Negro male high-status employee may be a member of a large firm—he may hold a supervisory position in a factory, for example—and thus would have less difficulty in locating an employer. The working woman who wants a white-collar job might find that most of her possible employers have small offices where informal contacts are regularly used in recruitment.

CONCLUSIONS

There are so many possible ways in which interracial contacts might benefit the Negro job seeker that it is difficult to say what part of the process is most important. Only one-quarter of our sample stated that they obtained their present job through friends, but this did not mean that the other three-

[4] Unpublished tabulation. Sheppard and Belitsky show that unemployed workers with high need for achievement hunt for jobs more aggressively.

quarters did not benefit from informal contact. Even the most casual infor mation about employment can be valuable, and such information tends t filter through the social system in many ways. One irony is that if a singl Negro is hired by a large plant, there are more white employees who know that the firm is integrated than there are Negroes; thus we arrive at th curious hypothesis that whites will have more information about jobs which are becoming "open" than will Negroes.

In general, the argument that has been advanced here does not hinge upon actual job discrimination. In the absence of all discrimination and prejudice, American Negroes would still suffer the consequences of racia segregation in housing, voluntary associations, and informal social relations These consequences are not merely psychic or social in character; they can be measured in crude monetary terms as well. The public school thus be comes a doubly important instrument of social mobility for Negroes; in addition to its obvious educational value, it provides an opportunity t begin building the interracial associations which permit an escape from th ghetto.

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Motivation and Aspirations of Southern Negro College Youth

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Occupational aspirations are related to motives and expectancies of male students in ten predominantly Negro colleges. Findings indicate that aspirations are positively related to achievement and failure-avoidant motives but more highly related to expectancies (academic self-confidence and sense of personal control). Results differ somewhat according to whether aspirations are measured by occupational prestige, ability demands, or nontraditionality. The study also examines the effects of internal-external bases of expectancies and questions the usual assumption that internal orientations are always positive motivators. Students believing in external control have higher aspirations when externality measures social-system obstacles rather than "fate" and when a generalized "Protestant ethic" belief in internal control accompanies a low sense of one's own competence.

Variations in the socialization of aspiration among subpopulations have received much attention by sociologists (Bennett and Gist 1964; Coleman et al. 1966; Krauss 1964; Sewell 1964; Turner 1964; Wilson 1959). However, research on differences in educational and occupational aspirations of white and Negro youth are often markedly contradictory (Antonovsky and Lerner 1959; Dreger and Miller 1960; Lott and Lott 1963; Morgan and David 1962; Rosen 1959; Veroff et al. 1960). Part of the difficulty in resolving these contradictions arises from the sparsity of studies about Negro youth,[1] and much of that research has focused mainly on class and family influences on aspiration. Few studies, using Negro samples (exceptions are Littig 1968; Nuttal 1964; Epps 1969), have examined the complicated relationships between aspiration and other psychological and motivational characteristics. Almost all research on motivational determinants of aspiration—for example, the vast literature on need for achievement—has been restricted to white males.

This study reports several sets of determinants of aspirations based on a large sample of students attending predominantly Negro colleges in the Deep South.[2] Elsewhere we have reported on the effects of family back-

[1] Another difficulty stems from limited controls in some of the comparative studies of Negro and white youth. This is especially serious when class controls are not introduced to compare the aspiration levels of the two groups. Uncertainty about reliable differences also arises from the all too frequent tendency to use nonrandom samples for comparison.

[2] The study is sponsored by a grant from the Cooperative Research Branch, Office of Education (OE 5-0789). Dr. Daniel Katz is the principal investigator. Other colleagues involved in the study are Dr. Edgar Epps, Miss Betty Penn, Dr. Rosina Lao, and Mrs. Muriel Beattie.

ground (Gurin and Epps 1966; Gurin 1966) and college characteristics (Gurin and Katz 1966) on students' aspirations. This paper focuses on a third set of influences—those embedded in attitudes and motivational characteristics.

MOTIVATIONAL FRAMEWORK OF THE STUDY

A common belief about the nature of motivation is captured by the phrase, "the problem is *in* the people." This view is expressed frequently in the national debate on public policy about poverty. Many critics of poverty programs believe that social intervention will not affect poverty because they think it stems primarily from lack of motivation. Those who defend situational intervention also often implicitly accept the same view of motivation. While they define poverty in terms of economic and social constraints and argue that it is *not* a problem of motivation, they are akin to the critics of social intervention because they assume that motivation is something "in" the person that somehow excludes the social situation.

However, motivational literature stressing individual characteristics that mirror situational determinants is gradually developing. This is particularly true of "situational" theorists who place great importance on a person's *expectancy of success.* In the McClelland-Atkinson tradition (Atkinson 1964), motivation refers to a state that results from at least three psychological factors: (1) the *latent motive* (a generalized disposition to approach or avoid a class of objectives), (2) the *incentive value* of a particular motive-relevant goal, and (3) the *expectancy* that performance will lead to the goal. These expectancies necessarily involve a relationship to the social world, since they depend on a person's judgment both of himself and his situation. Thus, motivational theories that emphasize expectancy factors do not divorce a person from his situation. Reality payoffs and situational determinants are directly tied to motivation via expectancy assessments.

This study reflects a similar approach to motivation; it focuses both on relatively stable characteristics and on situationally tied expectancies. It follows a set of studies in which level of occupational aspiration is used to indicate level of motivation; this, in turn, is viewed as a result of the joint effects of motive and expectancy factors.

Two achievement-relevant motives have been the focus of most previous studies of aspiration. One, the "approach" motive, is need for achievement—the disposition to strive for success in terms of some standard of excellence. The other, the "avoidance" motive, is fear of failure—the disposition to avoid failure in achievement-relevant situations. In previous research the need for achievement relates positively to actual occupational achievement (Morgan and David 1962; Nuttal 1964), to occupational mobility (Crockett 1962), and to aspirations for prestigious occupations (Burnstein 1963). Conversely, the fear of failure relates negatively to occupational challenge, with respect to both unrealistic (Mahone

1960; Morris 1964) and less prestigious occupational aspiration (Burnstein 1963).

The most frequently investigated expectancy factors are what might be termed "generalized" expectancies—a person's assessment of his general chance of success based on his previous experiences with success and failure. Several different constructs have been used to refer to people with low generalized expectancies of success. Such people have been described as lacking a sense of mastery or self-confidence (Strodtbeck 1958), as believing in external control (Rotter 1966), or as having a sense of powerlessness (Dean 1961; Rotter, Seeman, and Liverant 1962). Studies using various measures of these constructs have found that such people have low economic success (Strodtbeck 1958) and low educational aspirations (Rosen 1959) and aim at less prestigious occupations (Liberty, Burnstein, and Moulton 1966).

ISSUES OF INTEREST

Previous studies support the assumption that motive and expectancy factors are both important in accounting for the level of motivation reflected by occupational aspirations. With few exceptions, however, these studies have been conducted among white students, particularly with white undergraduate males. Whether the results can be generalized for other subgroups is questionable. One of our objectives, therefore, was to test generalizability of previous findings on our sample of students.

However, our major objectives go far beyond that. We were particularly interested in applying this kind of motivational model to this specific student population, since we thought expectancy factors would have special and heightened significance for Negroes. In addition, application of this model to a Negro population necessitated refinements and distinctions in some of the crucial constructs.

Special Significance of Expectancy Factors

Although traditional motivational constructs should distinguish high and low aspirants, we expected that certain characteristics would take on heightened significance in this sample. Expectancy factors should be unusually important in the motivational dynamics of these students because of their place in the social structure. When one is assured broad opportunities, as is likely for a white student from an economically comfortable background, his achievement values and motives may be the predominant determinants of his success. Since achievement motivation research in the McClelland tradition is based almost entirely on students from such backgrounds, it is perhaps not accidental that this research (Feather [1965, 1966] is a notable exception) has been singularly focused on the role of motives rather than of expectancies. However, the young people attending the colleges included in this study do not come from such benign environments. Approximately a third of these students grew up in homes that fall below

the national criterion of poverty (Gurin and Epps 1966). Moreover, even the middle-class students in this college group are more likely to assess their chances for success than their white counterparts. They must not only assess their abilities and skills, as white students do, but also consider the effect of the racial opportunity structure on their chances for success.

Support for the idea that expectancy factors would have special importance for Negroes is illustrated by data from the Coleman survey (Coleman et al. 1966) of educational experiences and attainments of Negro and white students. One of the attitudes measured relates to the students' beliefs that their own efforts could control their rewards. Translated into the concepts we have been discussing, this sense of personal control may be viewed as a generalized expectancy that one can succeed in life. The importance of expectancy factors in a Negro population is supported: with or without background characteristics partialed out, this sense of personal control accounts for three times as much variance in the achievement scores of Negro as of white students at the high school level, in both the North and the South.[3]

Since the present study is restricted to a Negro student population, we cannot directly test the assumption that expectancy factors are more critical for Negro students. Rather, we have examined the possible height-

[3] This result from the study of Coleman et al. (1966) can be used to illustrate what we mean by heightened importance: that expectancy factors should explain more of the variance in the phenomenon, in this case in the aspirations of these students. We are not necessarily arguing, however, that they should have different effectiveness in predicting aspirations in Negro and white student populations. If this were the case, the βs in a regression analysis of aspirations, using expectancy assessments as predictor variables, should be higher in a Negro population; and a given change in level of expectancy should result in a greater change in aspirations among Negroes than among whites. It is possible, however, that the higher variance explained by expectancy assessments in the Negro group could obtain because there is greater variance in these assessments in a Negro population. In fact, this is really what we are arguing. Since more Negro than white students face problematic futures, because of the way environment structures their opportunities, the expectancies of Negro students are likely to be lower as well as more variable.

It is interesting that this distinction is confused in the way the Coleman report treats the importance of personal control to account for variance in the verbal achievement scores of the two groups. Even though this report explicitly presents these two reasons for differences in amount of variance explained in the two populations (see Coleman et al. 1966, p. 329), the discussion of the role of attitude factors among Negro and white students strongly implies that this attitude of personal control is a more effective predictor (in the first sense) for Negro students. A closer examination of the data, however, does not support this. In fact, the actual difference in the achievement scores between those white students who believe that fate controls success and those who believe that their own efforts predominate in determining success is just as great as the difference between these two groups of Negro students (see Coleman et al. 1966, table 3:26.4, p. 323). There are simply many fewer white students who feel controlled by fate (see Coleman et al. 1966, tables 3:13.14, 15, 16).

It would be practically impossible for this measure of control to explain much of the variance in achievement scores of whites, since almost all the white students agreed that personal effort is the primary determinant of their success. The enhanced importance of this variable in the Negro student population probably stems, therefore, from the increased variance in their attitudes about control.

ening of expectancy factors by assessing their importance relative to other motivational factors. If the issue of self-confidence or expectancy is unusually important for these students, it should stand out in the motivational analyses—expectancy measures should be relatively more important than other characteristics in explaining their occupational aspirations.

The Basis of Expectancy

Up to this point we have discussed the question of how the level of expectancy may enter into the motivation of these students. To what degree does level of self-confidence or sense of competence account for aspirations? Motivational literature has also been concerned with the concept of basis of expectancy. Do expectancies derive from internal or external control? This important issue was conceived by Rotter and his students (Rotter 1966). An internally based expectancy emanates from the belief that success and failure depend on factors an individual can control—ability, skill, hard work, etc. An externally based expectancy results from the belief that success and failure depend on forces over which the individual has no control.

Consideration of the motivational role of internal-external control in this Negro population demanded certain distinctions not present in any recent literature. Previous research on the effects of internal and external bases of expectancy has manipulated or measured just two bases—ability or effort, on the one hand, and chance or luck, on the other. These may be the most pertinent bases for people whose advantaged position in the social structure limits other "external" determinants of success and failure. Certain groups, however, experience many external obstacles, which have nothing to do with chance. There are class-tied obstacles to many opportunities and to resources that open up other opportunities. These may be perceived correctly by low-income people as external, but not as a matter of luck. For Negroes there is the additional external factor of racial discrimination that operates in addition to class-structured obstacles. Discrimination may be perceived as operating quite the opposite of chance—predictably and reliably.

This is not an esoteric distinction. For people who are disadvantaged by systematic exclusion from certain opportunities and experience, believing in "chance" should have motivational implications different from being sensitive to reality-based external constraints. Present literature indicates that people who believe in external control are generally less effectively motivated and perform less well. But these same effects may not occur if we refine our concept of externality. As a matter of fact, it may be motivationally healthy instead of damaging for Negroes to focus on external factors, especially if such focus comes from assessing real probabilities of success in a way that will separate systematic and socially structured obstacles from the exigencies of fate. This possibility has not been explored before, to our knowledge.

We have developed a new internal-external control measure in order

to follow through the implications of this distinction. A number of forced-choice pairs of items probe the extent to which students stress personal inadequacies (lack of skill, ability, or proper attitudes), rather than discrimination factors, to account for the failure of Negroes to get ahead. We expected that students who more often attribute the failure of other Negroes to discriminatory obstacles would be positively rather than negatively motivated. Why should this be? A strong belief in the kind of internal control that places the blame for Negroes' exclusion from society on their own inadequacies implies self-image and esteem problems damaging to aspiration. Furthermore, students who blame discrimination may be more reality-oriented, since discrimination does operate as a deterrent in their world. To deny it implies defensiveness and an evasion of reality that should minimize effective expression of motivation.

Different Dimensions of Aspiration

For studies of Negro students, a more refined method of measuring occupational aspirations seems desirable. Most studies have related traditional motive and expectancy factors only to status or prestige aspirations. There have been a few exceptions, most notably two studies of white college males (Burnstein, Moulton, and Liberty 1963; Liberty, Burnstein, and Moulton 1966), which extended such analysis to another dimension of aspiration: the difficulty and competence level of the occupation. But, generally, research has focused on prestige level.

Extending motivational analysis of aspiration to other dimensions of job choice is vital in this study. The opportunity structure is beginning to open for Negro students. Yet we know very little about the motivational factors that encourage or constrain different types of choices. For instance, do certain motivational characteristics operate to restrict aspiration for a demanding and challenging job even as a greater range of jobs is potentially available? Furthermore, we would like to know what kinds of students are occupational pioneers. What motivational characteristics distinguish students who choose nontraditional occupations? Are they motivationally different from those who may aspire to high-prestige jobs but whose choices are quite traditional for Negroes? We have tried to explore such questions.

THE POPULATION

The data in this paper are from a study conducted by the Survey Research Center of the Institute for Social Research, University of Michigan, in cooperation with ten predominantly Negro colleges.[4] Some of the schools are publicly supported, others are privately endowed. Their academic standards vary. All are located in the Deep South, with almost exclusively southern students.

[4] Without exception these ten schools not only cooperated in the research but also became involved in the research process. We would be happy to acknowledge all those who worked closely with the study, if it were not for the agreement that the selected colleges would remain unidentified.

STUDY DESIGN

The larger study from which this analysis is derived was based on both a cross-sectional and longitudinal design. Questionnaires were administered to all students at the beginning of the academic year and to freshmen again at the end of their freshman year.

An additional random subsample of students participated in another aspect of the cross-sectional study. This special substudy, which was concerned with the way students judge a number of occupations, was conducted several months after all the students had been given the major battery of questionnaires. The list of occupations that was evaluated by this special subsample included all the occupational choices mentioned by at least 1 percent of the students in the earlier questionnaires. Thus, peer judgments were obtained for almost all occupations actually chosen by students in the general study. These peer judgments were then used to measure occupational choices on several different dimensions of aspiration.

We are reporting on data from male students in the cross-sectional analysis sample. Analyses done to date indicate that sex differences in aspiration are sufficiently important that separate and somewhat different analyses are required for males and females.

MEASURES

Occupational Aspirations

All students in the cross-sectional study were asked a series of questions about their occupational aspirations: what occupations were they considering, how committed were they to this choice, and how convinced were they of actually getting into this occupation? In the analysis below, two groups of males (a total of 228) were deleted: those who did not know what they wanted to do, and those who felt there was little possibility of attaining what they wanted. Thus the aspirations included in this analysis represent actual, rather than ideal, occupational goals.

Since evaluations of occupations were also obtained, we scored the students' own choices on the basis of these peer ratings. One characteristic rated was prestige. This was measured by using instructions from the classic study of occupational prestige conducted by the National Opinion Research Center (1953). The students were given a list of occupations and asked: "For each occupation, pick out the one statement that best gives your own personal opinion of the general standing such an occupation has." The five-point scale ranged from "excellent standing" to "poor standing." Another characteristic rated was ability demands or requirements. It was measured by the following question: "It is generally felt that various occupations require a certain amount of intelligence or ability. What percentage of the students in your class at college do you feel have the general ability to attain each of the following occupations? The seven-point rating scale ranged from "only the top one percent have the ability" to "almost everyone has the ability."

The means of the peer judgments of these two dimensions were used to score each student's choice on each of these characteristics. For example, a prestige score of 1.2 indicates that the student chose an occupation evaluated by his peers as having an average prestige rating of 1.2 on a five-point scale.

Nontraditionality was measured by another method. A nontraditional choice refers to an occupation in which there are few Negroes. It is nontraditional because it is outside the sector in which Negroes historically have found employment. It is not necessarily a job which has been closed to Negroes because of discrimination. That would be difficult to measure. Still, most of the jobs that are thus defined as nontraditional are also likely to have been highly discriminatory historically. To determine nontraditionality, we measured each student's choice against the percentage of Negroes in that occupational category in the 1960 Census. For example, students choosing engineering, an occupation in which only 0.3 percent are Negro, were making more nontraditional choices that students choosing social work, where 9.8 percent are Negro. The choices of all but 230 could be scored by using census data. The proportion of Negroes actually working in jobs chosen by our sample ranges from 0.3 percent to 14 percent.

To summarize, the level of aspiration reflected in each student's occupational choice was scored on three dimensions: for prestige and difficulty, using peer judgments; and for nontraditionality, using census data.

Motives

It was essential to select motive measurements that could be readily compared with those commonly used in achievement motivation studies. But, since information had to be collected from many students in varied physical conditions, we decided not to use the Thematic Apperception Test (TAT), which normally provides the measure of need for achievement in studies in the McClelland-Atkinson tradition. It was possible to use the Test Anxiety Questionnaire (Mandler and Sarason 1952), which is widely used to measure the negative achievement motive: the motive to avoid failure This is a self-report inventory about symptoms of anxiety in test situations. This is the best motive measure for comparing our results with other studies.

Other measures of motives derived from content analysis of answers to the following questions dealing with life goals: "As you think of your future life, what is your picture of the way you would like life to work out for you? When you think of the kind of person you would like to be as an adult, who is the one person you know whom you most want to be like? What is there about this person that you admire or would like to be like?"

Two measures coded from these questions, the achievement orientation and the desire for recognition, were expected to operate as "approach" motives. We conformed to criteria used in coding "need for achievement" according to TAT protocols. Achievement orientation was scored by fre-

quency[5] of mention of the following: (1) concern with a standard of good performance or some standard of excellence, (2) interest in work challenge or test of capacity for a difficult job, (3) concern with putting maximum effort or energy into work, or (4) stress on the process of striving or persistence in trying to reach goals set for oneself. Desire for recognition or success was scored by the mention of: (1) concern with obtaining a prestigious, respected job; (2) concern with prominence in career, recognition for outstanding contribution, and respect in one's field; or (3) concern with general success not restricted to specific work, such as gaining the respect of the community or being well-known.

A final motive measure, also coded from these questions, elicited desire for security. Although we expected that the motive to avoid failure would be an important negative determinant of aspirations, we also believed that desire for security might contribute significantly to avoidance motivation among a group that has experienced widespread economic deprivation. This desire for security was scored from responses which indicated concern about: (1) basic freedom from want, (2) adequate income, (3) job security, (4) stable family relationships, or (5) a pleasant, comfortable life.

Expectancy Factors

A frequently used measure of level of expectancy instructs the student to assess his probability of academic success, specifically: "How do you expect your academic performance this coming year will compare with others in your class?" Alternatives range from "I'll do better than 90 percent" to "better than 10 percent." This measure is sometimes called self-concept of ability (Bookover, Paterson, and Thomas 1967; Epps 1967), as well as level of expectancy (Mischel and Staub 1965). Here we refer to it as a measure of academic self-confidence.

The other expectancy measures we used are derived from a factor analysis of items in the Rotter Internal-External Control Scale (I-E Scale) (Liverant 1958), the Personal Efficacy Scale,[6] and those items discussed above that were developed by us to tap beliefs about causes for failure among Negroes. Three factors that resulted from this analysis were used.

Two of these factors, which distinguish whose success or failure is referred to, are composed primarily of items from the I-E Scale. One consists of five items phrased in the first person. For example: "I have often found that what is going to happen will happen" versus "Trusting to fate has

[5] In order to control for individual differences in verbal fluency when scoring the dispositions from the life-goal questions, we actually used ratio scores instead of raw frequencies. Each person's frequency score on each disposition was divided by the total number of responses he gave in both questions.

[6] The Personal Efficacy Scale, composed of items which are similar to those in the Rotter I-E Scale, was developed for political behavior studies at the Survey Research Center, University of Michigan.

never turned out as well for me as making a decision to take a definite course of action." The student who consistently chooses the internal alternative on these five items implies that he can control what happens in his own life. He is expressing a sense of personal control or belief in his own competence. Thus, in many ways, this measure resembles a measure of level of expectancy. He is expressing a high level of expectancy that he can make things work. We have called it a measure of personal control. The other factor consists of thirteen items that refer to other people. For example: "Becoming a success is a matter of hard work, luck has little or nothing to do with it" versus "Getting a good job depends mainly on being in the right place at the right time." This implies beliefs about causes of success and failure in other people's lives but not necessarily in one's own. We have called this a measure of control ideology. The empirical separation of these two sets of items indicates that these students react to their own personal control differently from the way they view the causes of other people's successes and failures.

The third factor involves only items that refer to Negroes specifically. It differs from previous measures in another way as well. The external alternatives in the previous measures are worded in terms of chance, fate, or luck; the external alternatives in the race-related items refer explicitly to systematic, external constraints, especially to racial discrimination. For example: "It's lack of skill or abilities that keeps many Negroes from getting a job; it's not just because they're Negro" versus "Many qualified Negroes can't get a good job; white people with the same skills wouldn't have any trouble." A consistent choice of the internal explanation implies blame of Negroes themselves; a consistent choice of the external alternative consistently implies belief that the system is more to blame. We have called this a measure of individual-system blame.

Control Variables

Six control variables were introduced. The first is academic class level, and the next two are grade performance and an ability control, which were provided by school records of grade point average and scores on whatever "ability" tests were normally administered upon entrance to the school. Since grading procedures and entrance tests varied, percentile score in the grade and test-score distribution of the student's own school was used. The other three control variables were part of the questionnaire. Two measure background factors: rural-urban background and parents' level of education (an index giving equal weight to education of mother and father). The final control variable measures the relevance of the occupational arena; it comes from the relative importance that the students assigned to occupational and career considerations when asked to rank their college goals and the areas where they expected to make major personal investments after college.

ESULTS

peration of Control Variables

wo fundamental questions about control variables arise: (1) Are they lated significantly to aspirations, so that their effects should be conolled before motivational measures are used? (2) Even if they are not lated to aspiration, do they condition the relationships between the rious components of motivation and level of aspiration?

Only parental education and rural-urban background are related sigficantly to any of the three dimensions of occupational aspiration. Males hose parents have the highest educational attainments are most likely aspire to prestigious and demanding jobs, but they are actually *less* kely to aspire to nontraditional jobs. These results are discussed more lly elsewhere (Gurin 1966). Rural-urban influence is more consistent ross these dimensions of aspiration. Students who grew up in the most ban settings have significantly higher aspirations on all three dimensions. the motivational analyses of variance presented below these two background variables are treated as covariates.

Although the other possible control variables—class level, grades, acamic ability, and occupational relevance—are not related significantly these dimensions of aspiration, they could influence the motivationpiration relationship. To test this possibility, separate motivational analys were run for the four academic class levels, for those in the upper and wer 50 percent on both entrance test scores and grade-point averages, d for those who differed in relevance of occupation.

Only the relevance variable has a fairly consistent conditioning effect. otivation-aspiration relationships hold only among students for whom the cupational arena is important and relevant. The motivational measures not differentiate level of aspiration in the group where the occupational ena has extremely low relevance. The role of arousal in experimental work achievement motivation suggests the reason for the conditioning effect relevance. Numerous experimental studies have indicated that achieveent motivation measures predict performance, persistence, or risk-taking havior only in situations where underlying achievement needs have been oused.[7] Therefore, the motivational analyses presented below exclude the 0 students for whom the occupational arena showed extremely low relence.

ode of Analysis

rtain motivational theorists, particularly the Atkinson group, make inractive predictions involving motive and expectancy factors; others sume that all motivational components combine additively. Since so tle research based on either theory has been done with Negro youth,

he importance of the life-situation in motive arousal is explored systematically in orthcoming book by Joseph Veroff and Sheila Feld, which analyzes data from a tional survey study of motives and roles (Veroff and Feld, in press).

it seemed most appropriate to examine both possibilities. Thus, we did a series of covariance analyses to explore how different measures of each motivational concept operate together. In each case, the covariates used are parental level of education and the student's rural-urban background; the independent variables are the motivational measures; the dependent variables are the three dimensions of occupational aspiration. Then, where

TABLE 1

RELATIONSHIPS BETWEEN POSITIVE MOTIVE-VALUE MEASURES AND ASPIRATIONS, CONTROLLING FOR PARENTAL EDUCATION AND RURAL-URBAN BACKGROUND OF THE STUDENT

	Mean Level of the Chosen Occupation*			
	Males with High Achievement Orientation		Males with Low Achievement Orientation	
Aspiration Measures	High Success Orientation ($N=50$)	Low Success Orientation ($N=225$)	High Success Orientation ($N=236$)	Low Success Orientation ($N=311$)
Prestige	2.16	2.40	2.18	2 07
Ability demands	2.06	2.27	1.99	1 90
Nontraditionality	2.14	2.32	2.17	2 07

	F Tests for Analyses of Variance		
Analyses of Variance of:	Prestige Aspirations	Ability Aspirations	Nontraditionality Aspirations
Achievement orientation	11.41***	14.78***	3 34
Success orientation	0.15	0 52	0.04
Achievement × success	1.64	1.33	1.28

NOTE.—The size of these relationships, and those with the other motivational variables, is shown in table 6.

The total N for all tables is 980, minus any deletions due to data missing in a particular analysis. Our covariance program allows for unequal numbers in the cells but does not permit missing data on any covariates or variates. Thus, the actual N varies from table to table. The basic sample of 980 excludes the following groups: those unsure of occupation choice or attainment of occupation choice (228); those for whom occupation has very low relevance (300); those whose occupational choices could not be scored on at least one of the three dimensions (230); and those with missing data on either of the covariates (216). These groups overlap to some extent.

* Five-point scale, 5 = high.

*** $P = .001$.

the effects were demonstrated to be additive, various measures of the several motivational components were combined in a multivariate analysis of aspiration.

Relationship between Approach Motives and Aspirations

Of the two approach motives, only achievement orientation is related to level of aspiration (see table 1). Males with high achievement orientation aspire for occupations more prestigious and more demanding than do males

with lower achievement orientation. This is not related, however, to traditionality. So, when a student places strong value on achievement (in talking about his life goals and what he admires about an important model in his life), he is likely to aspire to a difficult and prestigious job, which is as likely to be traditional as nontraditional.

The other measure we expected to operate in a heightening manner, the student's desire for recognition or status, is not related directly to any of these dimensions of aspirations, although it does slightly influence the way the achievement orientation operates. Achievement responses tend to be especially noteworthy for males who have little concern for recognition and status; in this group the males who value achievement hold considerably higher ability and prestige aspirations. (Both comparisons are significant at .05 using the Scheffe test for post hoc comparisons.) In contrast, there is little relationship between achievement orientation and prestige or ability aspirations for those who are strongly oriented toward status and recognition.

Since achievement orientation does not relate to nontraditionality, the relationship between motivation and aspiration differs depending on the dimension of occupational aspiration. Furthermore, even though a high achievement orientation encourages both ability and prestige aspirations, there is evidence that it is more pertinent in the choice of a difficult job than a prestigious one. This is clear when we contrast the achievement orientation of students who made two types of choices: those higher in ability rather than prestige vs. those higher in prestige rather than ability.[8] Those who chose difficulty over prestige have higher achievement scores than those who chose the reverse. (The mean proportion of achievement imagery in the life-value themes for those whose choice was relatively more difficult than prestigious is 40 percent; for those whose choice reflected relatively greater prestige, it is 25 percent. The difference is significant at .005.)

To summarize, the analysis of these measures of approach motives indicates that achievement orientation is associated with heightened aspirations, particularly for those who have relatively low concern over recognition and particularly for occupations that are highly demanding of ability and competence.

Relationship between Avoidance Motives and Aspirations

Both the avoidance motive measures, fear of failure and desire for security, have inhibiting effects on prestige and ability aspirations, although fear of failure seems to produce a somewhat greater effect (see table 2). They

[8] Although the ability and prestige of occupations, as judged by these students, are positively related, some occupations are judged to be relatively higher in one characteristic. For instance, even at a high level of prestige, certain occupations, such as architect, mathematician, writer, and composer, are judged to have relatively greater ability demands than prestige. Conversely, even at high level of ability demands, some occupations—dentist, registered pharmacist, statistician, and lawyer—are judged to have greater prestige than difficulty.

operate additively so that the most prestigious and difficult aspiratio are held by those who show low anxiety about failure *and* low desire security.

Nontraditionality is influenced primarily by the anxiety measure: s dents with greater anxiety about failure tend to choose more traditio occupations. There is no significant relationship between the desire security and traditional choice. Moreover, the anxiety measure appe less meaningful in this context than in differentiating prestigious and manding aspirations.

TABLE 2

RELATIONSHIPS BETWEEN AVOIDANCE MOTIVE-VALUE MEASURES AND ASPIRATIONS, CONTROLLING FOR PARENTAL EDUCATION AND RURAL-URBAN BACKGROUND OF THE STUDENT

	MEAN LEVEL OF THE CHOSEN OCCUPATION[a]			
	Males with High Fear of Failure		Males with Low Fear of Fa[illegible]	
ASPIRATION MEASURES	High Desire for Security ($N=105$)	Low Desire for Security ($N=97$)	High Desire for Security ($N=102$)	Low Des[illegible] for Secu[illegible] ($N=18$[illegible])
Prestige	1.72	2.03	2.32	2.5[illegible]
Ability demands	1.49	1.97	2.20	2.3[illegible]
Nontraditionality	1.78	2.14	2.29	2.2[illegible]

	F TESTS FOR ANALYSES OF VARIANCE		
ANALYSES OF VARIANCE OF:	Prestige Aspirations	Ability Aspirations	Nontraditiona[illegible] Aspiration[illegible]
Fear of failure	24.64***	22.53***	10.71**
Desire for security	14.91***	19.99***	2.60
Fear of failure × security	0.29	2.72	2.20

[a] Five-point scale, 5 = high.
** $P = .01$.
*** $P = .001$.

Relationship between Expectancy Measures and Aspirations

Both level-of-expectancy measures, academic self-confidence and sense personal control, are positively related to all three dimensions of occu tional aspiration (see table 3). They are primarily additive in their effe the most prestigious, difficult, and nontraditional choices are made those with both a strong sense of personal control and high acader self-confidence.

The only main effect of the two basis-of-expectancy measures, cont ideology and individual-system blame, is a significant relationship betwe the latter measure and the nontraditionality dimension. (See tables 4 a 5. These tables present the two basis-of-expectancy measures within d ferent levels of personal control, for reasons discussed below.) Furth

more, as expected, the direction of this relationship shows that there are positive motivational implications in having an external rather than internal ideology about the causes for failure among Negroes. Male students who believe that failure is most often the function of discrimination have significantly higher aspirations for nontraditional jobs than do those who attribute failure to the personal inadequacies of Negroes themselves (see table 4).

TABLE 3

RELATIONSHIPS BETWEEN TWO GENERALIZED EXPECTANCY MEASURES AND ASPIRATIONS, CONTROLLING FOR PARENTAL EDUCATION AND RURAL-URBAN BACKGROUND OF THE STUDENT

	Mean Level of the Chosen Occupation[a]			
	Males with High Academic Self-Confidence		Males with Low Academic Self-Confidence	
Aspiration Measures	High Personal Control ($N=311$)	Low Personal Control ($N=230$)	High Personal Control ($N=201$)	Low Personal Control ($N=227$)
Prestige	2.65	2.22	2.13	1.84
Ability demands	2.49	2.13	1.93	1.79
Nontraditionality	2.48	2.27	2.00	1.93

	F Tests for Analyses of Variance		
Analyses of Variance of:	Prestige Aspirations	Ability Aspirations	Nontraditionality Aspirations
Academic self-confidence	78.55***	74.20***	34.99***
Personal control	53 61***	55.81***	6.50*
Self-confidence × personal control	0 86	3.59	0.72

[a] Five-point scale, 5 = high.
* $P = .05$.
*** $P = .001$.

Otherwise, neither of these two measures of basis of expectancy is related to aspirations unless we control for level of expectancy, as reflected in the personal control measure. When we add this control, both individual-system blame and control ideology are related to aspirations among students who already have a low sense of personal control. In this low-expectancy subgroup it damages aspirations to have an internal control ideology (see table 5) and to blame Negroes rather than the social system for their problems (see table 4). The findings are particularly striking with respect to control ideology. Students who feel they cannot control what happens in their own lives, but who nevertheless hold an ideology that internal factors are responsible for others' success and failure, aspire to occupations significantly lower in prestige, ability demands, and nontraditionality than those who hold a more external set of beliefs about control

of reinforcement. (The Scheffe test for comparing the aspirations of intern and external control groups with low personal control is significant at .(on the prestige dimension and at .05 on both the ability and nontraditio ality dimensions.) The dual belief that success is a function of intern virtue but that one's own capacity and effort cannot produce desired goa implies a kind of self-blame that seems particularly destructive of aspir tions.

TABLE 4

RELATIONSHIPS BETWEEN PERSONAL CONTROL, INDIVIDUAL-SYSTEM BLAME AND ASPIRATIONS, CONTROLLING FOR PARENTAL EDUCATION AND RURAL-URBAN BACKGROUND OF THE STUDENT

	MEAN LEVEL OF THE CHOSEN OCCUPATION[a]			
	Males with High Personal Control		Males with Low Personal Control	
	Blame Attributed to:		Blame Attributed to:	
ASPIRATION MEASURES	Internal Factors[b] ($N = 280$)	External Factors[c] ($N = 181$)	Internal Factors[b] ($N = 213$)	External Factors ($N = 206$)
Prestige......	2.33	2.25	1.71	2.10
Ability demands......	2.23	2.16	1.84	1.92
Nontraditionality.......	2.17	2.49	2.06	2.27

	F TESTS FOR ANALYSES OF VARIANCE		
ANALYSES OF VARIANCE OF:	Prestige Aspirations	Ability Aspirations	Nontraditionality Aspirations
Personal control.........	42.61***	54.71***	5.63*
Individual-system blame...	0.16	0.14	11.21***
Personal control × individual-system blame.......	4.15*	0.70	0 38

[a] Five-point scale, 5 = high.
[b] Personal inadequacies of Negroes themselves.
[c] Discrimination.
* $P = .05$.
*** $P = .001$.

Although somewhat less striking, this same phenomenon also appear in the way the measure of individual-system blame operates in the low expectancy subgroup (see table 4). The prestige aspirations of those wit low personal control are significantly lower when failure of other Negroe is attributed to personal inadequacies rather than discrimination. (Th interaction of personal control, blame ideology, and prestige aspiration is significant at .05; the Scheffe test for comparing prestige aspirations c those blaming other Negroes and those blaming discrimination within thi

low-expectancy group is significant at .05.) The negative self-image that these beliefs about Negroes reflect apparently further depresses striving and motivation, already reduced by low self-confidence.

To summarize, the two level-of-expectancy measures have main effects on all three dimensions of aspiration. The direction of the relationships is as expected: the higher the expectancies of success, the more likely the

TABLE 5

RELATIONSHIPS BETWEEN PERSONAL CONTROL, GENERAL CONTROL IDEOLOGY, AND ASPIRATIONS, CONTROLLING FOR PARENTAL EDUCATION AND RURAL-URBAN BACKGROUND OF THE STUDENT

	MEAN LEVEL OF THE CHOSEN OCCUPATION[a]			
	Males with High Personal Control		Males with Low Personal Control	
	Belief that Other People's Lives Controlled by:		Belief that Other People's Lives Controlled by:	
ASPIRATION MEASURES	Internal Factors ($N=278$)	External Factors ($N=108$)	Internal Factors ($N=116$)	External Factors ($N=243$)
Prestige.......	2.30	2.33	1.55	2.07
Ability demands..... ..	2.16	2.21	1.57	1.99
Nontraditionality........	2.14	2.26	1.80	2.21

	F TESTS FOR ANALYSES OF VARIANCE		
ANALYSES OF VARIANCE OF:	Prestige Aspirations	Ability Aspirations	Nontraditionality Aspirations
Personal control.	46.11***	53.21***	5.03*
Control ideology.........	0.37	0.07	1.29
Personal control × control ideology.....	4.40*	2.87	2.65

[a] Five-point scale, 5 = high.
* $P = .05$.
*** $P = .001$.

aspiration for prestigious, difficult, and nontraditional jobs. Of the two basis-of-expectancy measures, only individual-system blame has a main effect. The more external ideology, blaming discrimination rather than internal characteristics, is associated with choice of a highly nontraditional job. Apart from this relationship, the basis for expectancy turns out to be important only for those whose expectancies of success are relatively low. There again we find evidence that an external, rather than an internal, ideology actually produces stronger motivation.

Relative Importance of These Motivational Characteristics for the Three Dimensions of Aspirations

We have seen how separate measures of different motivational components relate to the three types of aspirations. Generally, the various measures show additive effects, with the exception of significant interactions between a sense of personal control and the internal or external basis of expectancy.

Two other questions are interesting. First, is an additive model appropriate for depicting the joint effects of approach and avoidance motives, on the one hand, and level of expectancy factors, on the other? To explore this, we did a further analysis of covariance using (1) achievement orientation as a measure of approach motive, (2) a summary index of both fear of failure and desire for security as a measure of avoidance motive, and (3) another index combining personal control and academic self-confidence as a measure of level of expectancy. None of the possible interactions among these three variables and the three dimensions of aspiration is statistically significant. Therefore, with the measures used in this study, it appears that an additive model adequately depicts the relationship between motivation and aspiration.

Second, what is the relative importance of these different motivational characteristics in predicting occupational aspirations? To explore this we did three multiple classification analyses,[9] one for each dimension of aspiration. The measure of control ideology was not used because of its significant interaction with the personal control measure. Individual-system blame, which interacted with personal control only in relation to prestige aspirations, was excluded from the prestige analysis. With these exceptions, the β coefficients generated in this technique can be used to assess the relative importance of all our motivational measures.

Two results of this analysis support certain assumptions underlying the study (see table 6). First, for both prestige and ability aspirations, the two level-of-expectancy measures (academic self-confidence and personal control) have the two highest β coefficients; for nontraditionality, at least one of the expectancy measures has the highest β coefficient. This supports the assumption that expectancy factors are heightened in the motivational dynamics of these students. Second, the results also support the expectation that the importance of various characteristics depends on the type of occupational aspiration that is predicted. As already implied, and even more clearly shown in table 6, certain characteristics assume importance in predicting prestige or ability choices, while other characteristics operate primarily in explaining nontraditional choices.

[9] "The Multiple Classification Analysis (MCA) is a technique for examining the interrelationships between several predictor variables and a dependent variable within the context of an additive model. Unlike simpler forms of other multivariate methods, the technique can handle predictors with no better than nominal measurement, and interrelationships of any form among predictors or between a predictor and the dependent variable" (Andrews, Morgan, and Sonquist 1967, p. 8).

COMPARISONS WITH EARLIER RESEARCH

These results bear on some unresolved issues in prior research on motivational determinants of aspiration. One concerns the role of certain traditional motivational constructs in the dynamics of a Negro student population. Our results indicate that these traditional constructs—fear of failure, achievement concerns, and level of expectancy—help explain the aspirations of these Negro male students as they did for white males. Furthermore, these constructs are useful to explain aspiration for occupations high

TABLE 6

RELATIVE IMPORTANCE OF SEVERAL MOTIVATIONAL CHARACTERISTICS FOR THE THREE DIMENSIONS OF OCCUPATIONAL ASPIRATIONS

Motivational Characteristics	β Coefficients in Predicting:[a] Prestige of Choice	Ability Demands of Choice	Nontraditionality of Choice
Academic self-confidence	.35	.40	.35
Personal control	.28	.25	.10
Achievement orientation	.12	.17	.02
Success orientation	.01	.03	.01
Fear of failure	.19	.16	.12
Desire for security	.12	.14	.05
Individual-system blame	[b]	.00	.21

[a] These β coefficients from the Multiple Classification Analysis (MCA) provide a measure of the relationship of each predictor to the dependent variable, after adjusting for the effects of all other predictors. "They are analogous to the standardised regression coefficient, i.e., the regression coefficient multiplied by the standard deviation of the predictor and divided by the standard deviation of the dependent variable, so that the result is a measure of the number of standard deviation units the dependent variable moves when the explanatory variable changes by one standard deviation. . . . Since the variables involved in the Multiple Classification Analysis are more flexible than the usual numerical variables used in conventional multiple regression, no sign is attached to these beta coefficients. (The direction of the relationships can be seen by inspecting the cell means of the analysis of variance tables.) In all other respects, however, they appear analogous to the usual beta coefficients and are subject to the same advantages and disadvantages" (Andrews, Morgan, and Sonquist 1967, p. 22).

[b] Individual-system blame was not used in the MCA of prestige aspirations because it interacted with personal control and the MCA assumes additive relationships.

in ability demands and nontraditionality, as well as prestige—the dimension typically used to measure level of aspiration. Our results also show that the significance of different motivational characteristics depends on which dimension of occupational aspiration is considered.

To highlight this differential picture of motivation, let us see what we learn by adding the dimensions of ability requirements and nontraditionality to the information we have about the choice of prestigious occupations. The motivational characteristics of those making highly prestigious

choices show higher achievement orientation, lower anxiety about failure, less need for security, higher confidence of academic success, and higher sense of personal control and competence. If we know that their choices are also highly demanding of ability, they are likely to be young men with even higher achievement orientation and even less need for security. If we are interested in describing those who make nontraditional choices, a very different picture emerges. They are likely to be especially tuned in to the way the social system operates to structure opportunities and obstacles for Negroes. Our measure of individual-system blame has a main effect in explaining aspiration only when high or low aspiration is defined by nontraditionality of choice. Factors less important for nontraditional than for prestigious and demanding choices occur in the motive-value area. Neither achievement orientation nor concerns about security differentiate nontraditionality; furthermore, while anxiety about failure operates to some extent, it is less highly associated with nontraditionality than with either the prestige or ability dimensions.[10]

Results indicate that the expectancy aspect of motivation, at least for this population, is more complicated than is often assumed. In the first place, the level of expectancy, as represented by the expectation of academic success or control of one's own life, shows up as clearly separate from general beliefs about the bases of expectancy. Previous literature on internal-external control has not made this distinction between belief in the ability to control reinforcements by one's own efforts and a general, "Protestant ethic" belief about the relative role of internal and external forces in determining other people's lives. We have demonstrated the salience of this distinction several times.[11] In the factor analyses, all the internal-external control questions about the student's own internal resources were a separate factor from those tapping general beliefs about

[10] There are other factors that distinguish the three aspiration choices in addition to the motivational constructs we used. For example, a student's expressed readiness to leave his parents and go far from home to get an excellent job is related to choosing jobs demanding high ability and nontraditional jobs but not to choosing those high in prestige.

[11] Whether this separation of level of expectancy from bases of expectancy would occur in other populations is not clear from the literature. It is true that the Rotter group treats the I-E Scale, which involves both personal and general belief items, as a unitary measure. However, the factor analyses they report have all been done with white samples. There is some evidence in the *Equality of Educational Opportunity* report (Coleman et al. 1966) that this separation may be greater for Negro than for white students. At least in the item endorsement rate of Negro and white college students (see Coleman et al. 1966, table 4:12.1), we find that similar proportions of white students endorse items that make a personal referrent *and* those that measure beliefs about general causes of success and failure. In contrast, there are many more Negro students who profess beliefs in internal control as a general ideology than who answer questions about their own capacities to control success and failure in an internal direction. The possibility that this separation between self and other occurs only or primarily in subgroups, where personal expectancies are especially problematic because of social structural conditions, is explored further in a forthcoming article in the *Journal of Social Issues.*

determinants of success and failure. In addition, when indices were constructed from these two factors (control ideology and personal control), they related very differently to the other variables. For the most part, general ideologies about internal-external control are less important than feelings about personal control. Furthermore, where general beliefs operate, the aspiration level is higher for those who hold an external rather than an internal ideology, even though it clearly would be better for these students to believe firmly in their own internal capacity for control.

These findings (that an external rather than internal ideology goes along with heightened aspiration) are opposite to the way internal-external control is discussed in the literature and further highlight the complexity of the expectancy aspect of motivation. We had expected this to be true primarily when the external forces explicitly referred to reality obstacles likely to be faced by Negroes. But, overall, our results indicate there are at least two major exceptions to the generally accepted notion that belief in internal control is always positively motivating.

One exception deals with the relationship of self-blame to internal ideology. This can be illustrated by examining the effects on those who hold a general Protestant ethic ideology and lack a strong sense of personal control. If they believe that others can control what happens in their lives while they cannot, their expression of aspiration is damaged. Although students with a low sense of personal control already aspire for less prestigious and easier occupations, their aspirations are even lower if they have incorporated a strong ideology that hard work, ability, or other internal factors are the most important determinants of success in life. Such negative implications of self-blame ought to hold regardless of position in the social structure.

Beyond this kind of self-blame, however, there is an additional intrapunitiveness for members of minority groups. This is caused by placing the burden for the group's failure on personal inadequacies rather than on external social constraints. Thus, results indicate that lower aspirations are held by those Negro students of low personal control, whose commitment to a Protestant ethic ideology is so great that they attribute Negro problems to inadequacy and lack of motivation rather than to discrimination in the social system.

The other exception to the assumption that internal control is positively motivating applies to all students, not just to those who express relatively low expectancies. This is illustrated by examining the tie between blaming discrimination for Negroes' exclusion from many societal rewards and the aspiration for occupations that are nontraditional. These two factors are associated, regardless of the degree of personal control. Therefore, something beyond a self-esteem explanation would seem to be operating to account for yet another instance of positive consequences stemming from an external rather than an internal ideology. At least two other explanations are possible. First, it may suggest greater sophistication and reality

orientation for those who stress discrimination. Most of the literature (the consequences of internal versus external control assumes that the e ternal forces are haphazard; belief in fate implies unsophisticated thinki and unrealistic judgments about causality. On the other hand, discrimin tion, unlike fate, is a reality that these students must assess. Attention to instead of damaging aspiration, may imply a hardheaded realism that a tually enhances capacity to cope with obstacles and to respond to oppo tunities, both of which are socially structured.

Second, it is also possible that those who focus on the causal significan of discrimination have a predisposition toward unconventionality. Rust (1967) discusses just this kind of uncoventionality in describing how youn Negroes in urban ghettos differ from their parents and grandparent "The miserable yield to their fate as divinely ordained or as their own fau and, indeed, many Negroes in earlier generations felt that way. Toda young Negroes aren't having any. They don't share the feeling th something must be wrong with them, that they are responsible for the own exclusion from this affluent society." Not all young Negroes, howeve dissent from the older and more conventional point of view. In fact, this study acceptance of the traditional explanation was the norm: abou half of the total population answered all, or all but one, of the four que tions on individual-system blame by putting blame on Negroes ther selves. So the system blamers in our sample are unconventional in the analysis of the situation. Their view differs not only from the attitudes many of their parents but even from the widely accepted beliefs of the peers in predominantly Negro colleges. Therefore, that they are also choo ing unconventional roles for Negroes should not be surprising. We migl note that their unconventionality is not only reflected in their choice nontraditional jobs. Other findings indicate that the students who blan discrimination also have a greater involvement in civil rights activiti and express stronger criticism of the traditional locus parentis role of tl college administration.[12]

In addition to highlighting these distinctions within expectancy co structs, our expectancy results also support our general assumption th self-confidence or level of expectancy would take on heightened motiva tional significance for these Negro students. We argued that, regardle of whether they evaluate the social world realistically or unrealisticall the fact that it impinges so directly on their objective probabilities of suc cess should accentuate the importance of their expectancy assessment beyond the motivational meaning they may have for white students. Th only way we could examine this assumption was to compare the importanc of expectancy assessments, relative to other motivational factors, in th dynamics of these students. These comparisons supported our assumptio Of all the psychological factors we measured, either academic self-conf dence or personal control showed the strongest relationship to aspiratio

[12] Further analysis of the psychological and social unconventionality of these no traditional aspirants has been done by Lao (1969).

This is equally true for all three dimensions of aspiration. Other factors, such as achievement-related motives or values, are not unimportant; but, with the measures of expectancies, motives, or values we used, self-confidence and personal control exert the greater influence on aspirations.

This finding has practical as well as theoretical implications. These components of motivation should differ in how much they can be modified by environmental and educational influences. Motives and values are usually assumed to develop in early childhood and to endure as relatively stable characteristics. If this is true, and if one is trying to affect the motivation of late adolescents, it is discouraging to view their problems as motive disposition. Events occurring in late adolescence or early adulthood, such as specific college experiences, may not effectively alter such dispositions or increase strength of motivation, *if* the influence of early experiences is as great as often assumed. In contrast, expectancy factors are usually considered less generalized and stable than motives and values. Typically, they are viewed as subject to considerable modification by specific success and failure experiences in later life as well as in early childhood. In fact, we know from research that it is easy to modify the level of expectancy in adults, at least in experimental situations, by exercising control over actual success-failure experiences. We still are not sure how to produce the most appropriate expectancy generalization and the most persistent and best performance consequences, but we do know that situational factors can be used effectively to change expectancies. Thus, since expectancy factors are demonstrably important in this student population, motivation can be enhanced by educational strategies that are geared explicitly to skill and expectancy training. Some of these strategies, which might be used effectively in both curricular and extracurricular areas, are discussed elsewhere (Gurin and Katz 1966, chap. 11).

ASPIRATIONS AND ACTUAL ACHIEVEMENTS

This study is only one aspect of a larger research interest. We have in progress a longitudinal study of the freshmen in our original research. We will explore how their aspirations have changed during their college experience. In still another study, perhaps more important from the perspective of social change, we are following our original students into postcollege life. What background, motivational, college, and postcollege experiences will explain their actual occupational achievements? Who are the students successfully on the way to realizing their earlier aspirations? Whose aspirations and achievements diverge the most? Can we predict these results from what we knew about them as college students? Given the still problematic response of the labor market to any but the very "top" Negro college graduates, we surmise that postcollege situational factors, reflected through the expectancy assessment of these students as young adults, will assume even more motivational significance in explaining their actual occupational achievements than in explaining their earlier aspirations.

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Occupational Attainment among Male College Graduates[1]

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In a large national survey of 1961 college graduates, occupatio prestige expectations in 1964 were the strongest predictors of prestige of the job actually held by a man in 1968. The strong academic variable was graduate school attendance, followed by coll grades, academic ability, and college quality. The actual degree earn between 1964 and 1968 was a rather weak predictor, probably beca not all men had yet earned their highest degree. Prestige expectati held at earlier periods were not so closely related to job prestige as 1964 expectations were, but those held as early as the freshman y in college were of some importance.

The operation of the major determinants of occupational attainment is now rather well understood (Blau and Duncan 1967; Duncan, Featherm and Duncan 1968). Parental socioeconomic status (SES) and intellect ability affect the levels of formal education a man receives, which in tu influences the prestige of the occupation he enters. At successive stages his career, previous occupations loom larger as direct determinants of t prestige of the job currently held, with the background factors and edu tional attainment decreasing in direct influence.

Given this general framework, how does higher education affect a ma occupational attainment? Obviously, a person is likely to be better off if graduates from college than if he does not. Will his college record affect t prestige of the job he holds? How important is enrollment in graduate sch or the earning of a higher degree?

Any attempt to show how higher education influences occupatio achievement must consider the occupations themselves. Most males co to college with some kind of occupation in mind, even if they do not kn much about it. If a person does not change his career intentions, his periences with higher education cannot possibly have changed them. Tl is a limitation that must be taken into account. To ignore it would ar ficially inflate the effects of higher education.

A relatively complete model of the attainment process among coll graduates would start with parental SES and the person's own intellectu ability and end with the prestige of the job he was currently holding would include as intervening variables several measures of career intentio

[1] The research reported herein was supported through the Cooperative Research Progr of the Office of Education, U.S. Department of Health, Education, and Welfare, un contract SAE-9102, by the National Institute of Mental Health under grants M56 M5615-02, M5615-03, M5615-04, and M5615-05, and by a contract with the Carne Commission on the Future of Higher Education.

(the prestige associated with occupations expected at various times during the college and postgraduate career) and measures of academic performance (grades) and advanced training (enrollment in graduate or professional school and higher-degree earning).

An earlier paper has reported the results of an analysis of prestige expectations that included data covering the freshman year in college through the third year after graduation (Spaeth 1968*b*). Details on study design and measurement reported there will be only briefly summarized here. This paper will be primarily concerned with the prestige of the occupation actually held by male college graduates seven years out of college.

DATA

The data for this study are taken from the National Opinion Research Center's (NORC) longitudinal survey of June 1961 college graduates. A sample of 41,000 graduates from 135 colleges and universities received self-administered questionnaires once a year from 1961 through 1964. In 1968, 6,000 of the 20,000 who had returned all four earlier questionnaires were sent a fifth one. The response rate of this wave was 81 percent. The first four waves of the study were largely devoted to career plans, career development, and job characteristics. The latest round also included this information but was primarily concerned with alumni views on their own colleges and on higher education in general.

Data from the first four waves indicate that no appreciable bias is introduced by using the responses of persons who had returned all four questionnaires instead of using data on all possible respondents. Presumably, the relatively high response rate makes the same true of the fifth wave. We shall see that this is the case for many of the correlations reported here.

The variables to be used in this analysis are shown in table 1, which gives their means, standard deviations, and frequencies. The first five of these variables pertain to some aspect of the man's intellectual ability or academic performance. The measure of ability is a composite score based on various college admissions tests, converted to deciles. The mean of 5.9 indicates that college graduates are slightly above the average of all college entrants. The small N is the result of collecting this information on a subsample of respondents. All responses are weighted to account for undersampling graduates of small colleges. In the case of ability, this weighting was done in such a way that each of the 699 cases is a different individual. Weights for all other variables were computed by multiplying the person's responses by a weight appropriate to his college.

The measure of college quality used here, selectivity, was developed by Astin (1965). It was scored in such a way that a mean of 50 and a standard deviation of 10 were produced with colleges as units. Since more persons graduate from large than from small colleges, basing the measure on persons raises the mean, as in table 1.

The value for grade point average (GPA) indicates that the mean grade for male college graduates was B−. The mean of 1.2 for enrollment indi-

cates that these men had attended graduate school for slightly more than a year between 1961 and 1964. Since degree earning pertains to the period after 1964, it does not overlap in time with enrollment. The value of .5 indicates that most men did not earn an advanced degree between 1964 and 1968.

TABLE 1

MEANS AND STANDARD DEVIATIONS OF VARIABLES USED IN ANALYSIS OF MEN'S OCCUPATIONAL ATTAINMENT

Variable	Mean	S.D.	*N*
Intellectual ability*	5.9	2.6	699
Selectivity (college quality)	55.5	9.4	19,734
Respondent's GPA†	4.9	1.5	19,415
Graduate enrollment‡	1.2	1.2	19,734
Higher degree earned since 1964§	0.5	0.8	4,419
Freshman prestige expectations	64.9	9.2	17,253
Senior prestige expectations	63.1	11.2	19,513
1964 prestige expectations	63.6	12.6	19,280
Prestige of 1968 job	60.4	12.2	4,425

* In deciles.

† A+ and A = 9; A− = 8; C− = 2; D+ or lower = 1.

‡ Number of years between 1961 and 1964 during which the respondent was enrolled in graduate or professional school.

§ Ph.D. or professional = 2; master's = 1; none = 0.

Prestige scores were derived from a recent NORC survey (Hodge and Siegel 1964) that asked respondents to rate over 200 occupations chosen to match detailed census categories. The means reported here correspond to such occupations as federal public administration, natural and social sciences (but not college teaching), and school teaching. Old-line professions, such as law, medicine, and college teaching, score considerably higher. Owing to a programming error, the earlier paper on prestige expectations was based on data that did not include many of the men interested in business careers. The results reported here will therefore differ slightly from those published earlier.

The frequencies in table 1 refer to the data used in this analysis. Correlations among variables measured during the first four waves of the survey are based on the larger *N;* those involving fifth-wave variables (higher-degree earning and 1968 job prestige) are based on the weighted *N* of approximately 4,500. Even with such an *N*, all analyses except those including intellectual ability are based on enough cases that questions of statistical significance need not arise.

Strictly speaking, the above procedure is legitimate only if the fifth-wave cases can be considered a sample of the earlier ones. Of course, this was true of the design, but it may not be true of the questionnaires actually returned. The most pertinent comparison in this case is among the actual correlations used in this analysis. Those given in table 2 were computed as described above. Another set was computed on the fifth-wave cases. Of the

fifteen correlations common to the two samples, eleven were within an absolute value of .03. All were within .05. Results of parallel multiple regressions were also very close to each other.

RESULTS

The occupational attainment of male college graduates is a process that will be viewed here as essentially beginning at college entrance and ending seven years after graduation. One of the initial variables in the system, intellectual ability, actually antedates college entrance, since it was based

TABLE 2

CORRELATIONS BETWEEN VARIABLES USED IN ANALYSIS OF MEN'S PRESTIGE EXPECTATIONS (PEARSON *r*)

Variable	Selectivity (College Quality)	Respondent's GPA	Freshman Prestige Expectations	Senior Prestige Expectations	Graduate Enrollment	1964 Prestige Expectations	Higher Degree Earned since 1964	Prestige of 1968 Occupation
Intellectual ability....	.312	.342	.224	.232	.234	.210	.208*	.204*
Selectivity (college quality)...........	...	.024	.167	.098	.150	.090	.173	.174
Respondent's GPA...	...	...	.119	.281	.311	.259	.262	.255
Freshman prestige expectations.........	...	...	...	.476	.309	.333	.270	.322
Senior prestige expectations..............	...	...	...	...	.484	.578	.350	.460
Graduate enrollment..	...	. .	. .	...	...	.526	.568	.475
1964 prestige expectations.............	...	...	...	...	...	...	.404	.605
Higher degree earned since 1964.........	...	...	...	...	...	...	...	.423

* Estimated on the basis of other correlations. See n. 2.

on admissions tests. Parental SES has been omitted because it is not important enough to include in this population. The other two initial variables are the quality of the college from which a man graduated and the prestige of the occupation that he said was his career choice when he was a freshman. The three initial variables are viewed as influencing college grades, which, along with the first three, affect senior prestige expectations, and so on. Occupational achievement is treated as being influenced by all eight of the variables that precede it in the model. Path analysis is obviously an appropriate analytical technique for depicting a process of this kind (Duncan 1966). Results for the prestige expectations are very similar to those reported earlier (Spaeth 1968*b*); they will be briefly summarized here. Actual occupational attainment will be treated in greater detail.

The first step is the analysis of college grades (see fig. 1). As one might

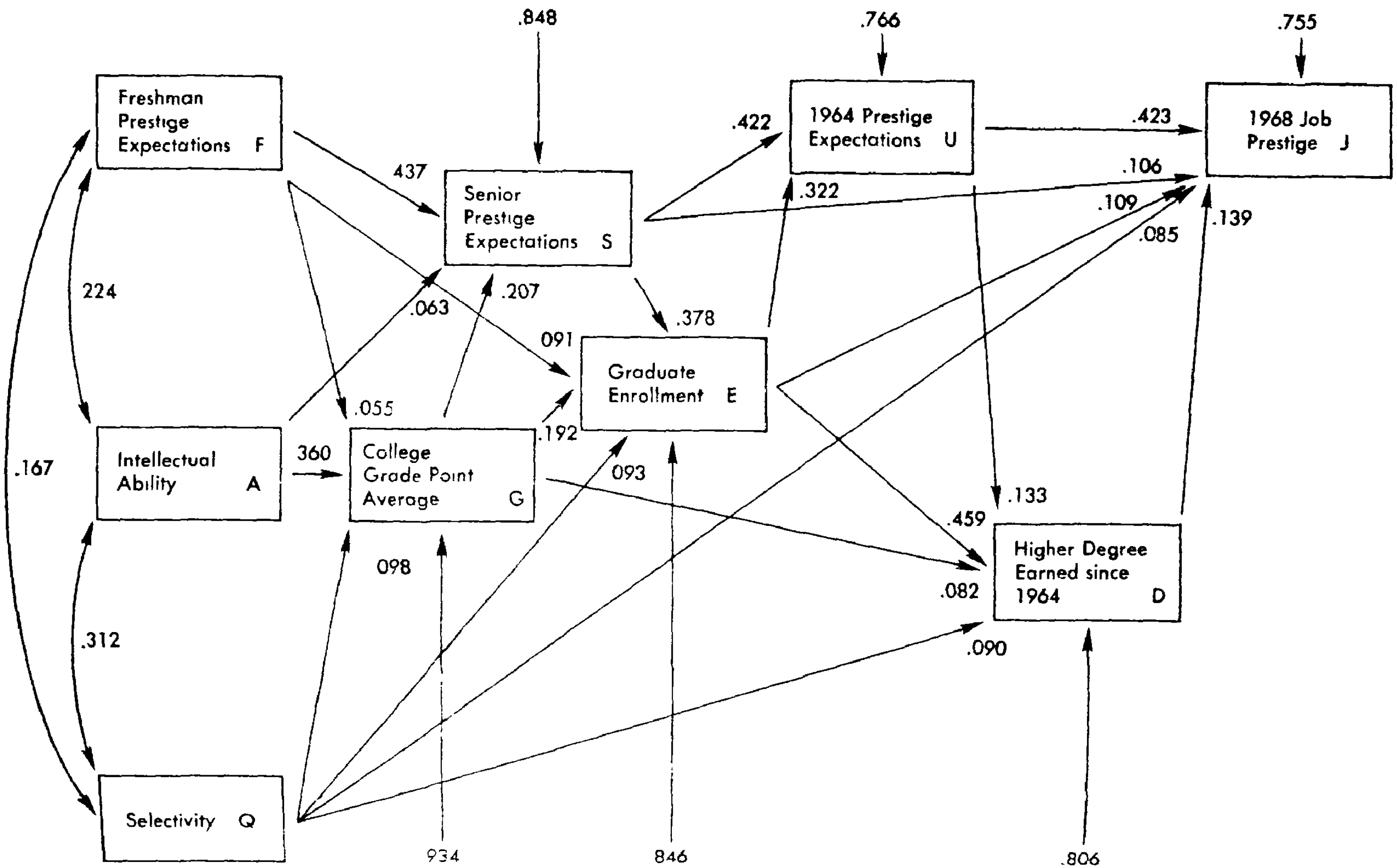


FIG 1.—Path diagram relating men's 1968 occupational attainment to prior occupational expectations and intellectual variables

xpect, the primary determinant of grades is intellectual ability, which has direct path of .36. The impact of college quality (selectivity) is small and egative, −.10. This net relation is negative because prior to 1961, at least, olleges graded on the curve. Therefore, the correlation between grades and ollege quality is essentially zero. In other words, it is harder for a bright erson to get good grades at a good college than at a poor one (Davis 1966).

The primary determinant of senior prestige expectations is the prestige f the freshman occupational choice, as the path coefficient of .44 indicates. rades are also an important element in this process, as the path of .21 hows. Since this coefficient represents the effects of GPA, net of the three arlier variables, and since the other major determinant of senior expectaions is freshman expectations, we may conclude that the grades a person eceived led him to change his occupational plans. If he got good grades, he xpected to be in a more prestigious occupation than formerly; if he got oor ones, he lowered his expectations.

A considerable period of graduate or professional training has become a irtual necessity for membership in many of the most prestigious professions. Lawyers and physicians need appropriate professional degrees, and cademicians require Ph.D.'s, or at least A.B.D.'s (all but dissertation). his fact is reflected in figure 1. The strongest determinant of enrollment graduate school is senior career plans, with a direct path of .38. Freshman xpectations make a discernible contribution (.09), which must be interreted as a carry-over of original plans. Among men whose changed career lans included a rise or drop in prestige, the earlier plans had an influence. his rather small effect needs to be distinguished from the results of perstence, which are given by the indirect path running through senior exectations to enrollment, $p_{ES}p_{SF}$ (subscripts are given in fig. 1). The value f this path, .17, is an estimate of the extent to which male seniors had the me career intentions as when they were freshmen and therefore went to raduate school.

Of course, one must be admitted to graduate school in order to attend, nd men with better college grades stand a better chance of admission than o men with poorer ones. The extent to which this is the case is only partly dicated by the direct path of .19. In addition, the fact that grades influice senior career choices must be taken into account. The appropriate direct path, $p_{ES}p_{SG}$, has a value of .08. The sum of the two values, .27, dicates the "true" effects of grades on graduate school attendance, net of e three initial variables.

The effects of selectivity on graduate school attendance are considerably eaker than those of grades. Graduating from an obscure college seems to a rather small handicap in gaining admission to graduate school. Which aduate school one attends is a different matter, however. College quality a rather strong predictor of the quality of the graduate school attended, lough grades are by no means weak (Spaeth 1968*a*).

Despite the important role that graduate training plays in career adancement, senior prestige expectations are the most important indeendent predictor of expectations held in 1964, three years after graduation,

as the direct path of .42 indicates. The importance of the realization of career plans through enrollment is given by the compound path, $p_{UE}p_{ES}$, with a value of .12. Since the model can omit all variables prior to senior expectations, the total effects of this variable are given by the sum of the two coefficients, .54.[3]

The total impact of graduate enrollment on 1964 expectations is given by the direct path of .32. This is the effect of attending graduate school brought about independently of a man's efforts to realize earlier career plans through advanced training. It indicates that success or failure in gaining graduate training is an important factor in changing a man's career plans. If he goes to graduate school, he is likely to raise his sights. If he does not go, he is likely to lower them.

Analysis of actual occupational attainment raises a problem not heretofore considered. The rather high correlations between prestige expectations held at two different times can be interpreted as nothing more than persistence or consistency in verbal behavior. The link between expectations and reality, between what a man thinks he will do and what he actually does four years later, is somewhat more problematic. A change in plans is only one factor that might weaken this link, and even this one must receive a new interpretation after a man enters the labor force. Consider a man who consistently expected to be an engineer, until he went to work for a large corporation. There he finds that advancement comes to men in management and accordingly changes both his plans and his job. With the time periods used in this analysis, such a change could easily occur too late to be taken into account.

Another factor that might weaken the link between plans and reality would be the failure to gain acceptance by various occupational gatekeepers. One such instance might involve not meeting certain certification requirements, such as the holding of a higher degree. The earning of such a degree is the next step in this analysis.

Of the four direct paths to degree earning important enough to be included in figure 1, only one is of great importance. Enrollment in graduate school between 1961 and 1964 has a direct path of .46. The reader is again reminded that degree earning applies only to the period after 1964. Nevertheless, enrollment during at least one of the three years immediately following college graduation is almost a necessary condition for the attainment of any kind of advanced degree, and enrollment during all three years is necessary for earning the Ph.D. Among men who had not enrolled between 1961 and 1964, only 6 percent had earned an advanced degree of any kind, and none had earned the Ph.D. With each additional year of enrollment,

[3] The criterion by which a direct path can be omitted from a path diagram is the ability of the remaining variables to reproduce the correlation between the omitted variable and the dependent variable. The formula for estimating the correlation between ability and 1964 expectations is, for example, $r'_{UA} = r_{US}r_{SA} + r_{UG}r_{GA} = .173$. The original correlation is .210. All variables with discrepancies less than .05 have been omitted from the path diagram. The correlations between ability and the two 1968 variables were estimated by assuming that the direct path was zero and performing similar calculations for the relevant paths and correlations.

the percentages holding any advanced degree increased from 39 to 64 to 89. Comparable percentages for Ph.D. holding are 1, 2, and 21 percent. To start late and earn a higher degree is not an easy, or at least not a common, accomplishment.

The next most important determinant of degree earning is 1964 prestige expectations, with a direct path of .13. The linkage between senior expectations and enrollment is .38. Since the two paths are conceptually similar, why is the value for the later step so low? Part of the reason for this contrast is the presence of enrollment as an earlier variable in the causal system. The variables that explain enrollment do not include a cause with effects as potent as those of enrollment on degree earning. If such a variable could have been included, the impact of senior expectations on enrollment would probably have been reduced.

A glance at figure 1 shows that degree earning seems to have only a weak influence on 1968 job prestige. We must at least suspect, then, that correlations between degree earning and other variables are reduced by measurement error. The "scale" on which degree earning is measured—0 for no degree beyond the bachelor's, 1 for a master's, and 2 for a professional or doctoral degree—is arbitrary. Perhaps a better scale based on finer discrimination between degrees would yield better results. Arguing against these considerations, however, is the fact that the correlation between degree earning and graduate enrollment is .57. Correlations between other variables and degree earning *could* be at least this high. Measurement error is probably not the primary cause of the findings reported here. A more probable set of reasons for the low correlations will be discussed in connection with the analysis of 1968 job prestige, to which we now turn.

By far the strongest direct influence on the prestige of the job held by a male college graduate seven years out of college is the career he expected to be in, as reported some four years earlier. The value of the path from 1964 prestige expectations is .42, almost exactly the same as the paths linking the expectations variables themselves. There is also a rather weak path directly linking senior expectations to job prestige (.11). Here we see a "hangover" effect similar to that of freshman expectations on those held in 1964. The path coefficient of .14 from degree earning is probably too small, and that from enrollment (.11) probably too large. Since the value of the former is greater than that of the latter, some explanation of this judgment is required. The primary criterion of success in analyses of this kind is the explanation of correlations between an "early" and a "later" variable by the introduction of other variables that come between them.

In this instance, an appropriate question would be: How does enrollment influence job prestige? A reasonable answer would be because it is necessary for the attainment of an advanced degree and because it influences a man's occupational decisions. To some extent, this interpretation is supported by the data. The original correlation of .48 between enrollment and job prestige is reduced to a direct path of .11. The indirect path from enrollment to 1964 expectations to 1968 reality, $p_{JU}p_{UE}$ = .14, is larger than the direct path. The indirect path through degree earning, $p_{JD}p_{DE}$ = .06, is rather small,

however. Its size results from the fact that the direct effects of degree earning are small. This, in turn, follows mostly from the value of the zero-order correlation between degree earning and 1968 job prestige, .42.

Is there reason to believe that this correlation should be larger? We cannot rule out inadequacies in measurement, but another approach seems more fruitful. It is likely that seven years after graduation is still too soon for a college class to complete its advanced education and that the relationship between degree earning and occupational attainment will become greater with the passage of time. Although 72 percent of the men who expected a professional degree actually held one, only 23 percent of those expecting a doctorate had earned it by 1968. These expectations *may* be overly optimistic, but they seem to rest on a rather solid base. Of the men who expected to earn a doctorate but had not yet done so, 84 percent had earned a higher degree of some kind, usually a master's.

If the observed correlation between degree earning and job prestige is too low, what would be the effect of raising it? Increasing the value of this coefficient by .05 while altering no others raises the value of the direct path from degree earning by .07 and lowers that from enrollment by .03. An additional increment of .05, or a total of .10, raises the path from degree earning a total of .16, to .30, and lowers the path from enrollment by .07, to .03 An increase of .10 makes the hypothetical value of this correlation .52. The correlation between highest degree *expected* and prestige of occupation expected in 1968 is .55. Given the extent to which college graduates tend to do what they say they expect to do, the value of this correlation must be considered as presumptive evidence that the direct effect of degree holding on occupational attainment will be greater at career stages later than seven years after college graduation. It would be unwise and premature to use these data as evidence that the connection between earning a higher degree and gaining high occupational prestige is slight.

One question not easily answered from a path diagram concerns the nonspurious influence of most of the independent variables on the final dependent variable. Thus, the direct effects of grades on occupational attainment appear to be nil. The reason for this, however, is the presence of a fairly large number of important intervening variables. A true estimate of the effects of grades—within this model—would control only for the three initial variables, because the other four independent variables are treated as results of GPA and not as causes of it.

One way to estimate the true contribution of a variable would be to add the direct path to all indirect paths that involve only variables after the one in question, a task that would require, in this model, the decomposition of seven sets of normal equations and produce considerable rounding error. An equivalent approach is to run regressions including only those variables that might make the effects of another spurious—antecedent, but not intervening, variables (Duncan et al. 1968, pp. 30–33). The results of such a set of successive regressions are given in table 3.

The first column shows the effects of each of the three initial variables, independent of the other two. The value of .11 for ability indicates that the

effects of this variable are not strong. We should remember that the correlations of this variable with the 1968 variables had to be estimated from other data and are probably slightly underestimated. Nevertheless, intellectual ability, or IQ, is not unimportant in the process of achievement. To understand why, it would be necessary to analyze a causal system different from the one given here, a system in which ability would be treated as a determinant of college entrance or graduation. In such a system, the effects of ability on occupational attainment would be much larger than they are here.

TABLE 3

INDEPENDENT CONTRIBUTIONS OF DETERMINANTS OF 1968 JOB PRESTIGE (PATH COEFFICIENTS)

Variable	Intellectual Ability, Selectivity, Freshman Prestige Expectations	GPA	Senior Prestige Expectations	Graduate Enrollment	1964 Prestige Expectations	Higher Degree Earned since 1964	Higher Degree Earned since 1964*
Intellectual ability	.112	038	.016	.004	−.008	...	...
Selectivity (college quality)	.091	.111	.112	.088	.093	.080	.085
Freshman prestige expectations	283	271	.117	093	.074	.065	...
GPA	...	207	.134	082	.065	.052	...
Senior prestige expectations	..	...	.352	.244	.074	.073	.106
Graduate enrollment	...	...	...	.288	.156	.099	.109
1964 prestige expectations	...	. .	...	...	.432	.417	.423
Higher degree earned since 1964	...	...	...	...	...	.129	.139
R^2	.130	.167	.256	.316	.425	.435	.430

* Coefficients in fig. 1.

Reading across the rows of a table such as table 3 gives some idea of the intervening variables that serve as primary transmitters of the effects of the one under consideration. Since the path coefficient for ability decreases most dramatically after GPA is introduced, we may conclude that the former's effects on the latter are largely responsible for its impact on occupational attainment.

College quality has a small impact (.09) that is not much mediated by other variables in the model. One rather interesting point regarding the effects of this variable may be inferred from the path diagram. Its small influence is important enough to take into account in relation to behavior but not to plans. With regard to attending graduate school, earning a degree, or holding a more or less prestigious job, selectivity's direct effects are about .09. Even though men do not think that the quality of the college they attend will affect their careers, it seems to have a slight influence.

Freshman expectations are by far the most important of the three initial

variables, as the coefficient of .28 indicates. That this value is smaller than those for later career expectations indicates that it behaves reasonably in this system. Earlier variables should be weaker than later ones of the same kind. Nevertheless, it is impossible to evaluate the size of this coefficient. Does .28 indicate rather impressive stability in career intentions, considering that it applies to a span of at least eleven years? Or does it indicate that a man's career choices are really pretty changeable? In any event, inspection of the row for freshman expectations shows that the effects of this variable are largely transmitted through senior expectations because that is where the largest drop in the path coefficients occurs.

The second column of table 3 shows the nonspurious effects of grades on occupational attainment. The coefficient of .21 does not mean that grades are overwhelmingly important, but their role is clearly too great to be ignored. The square of the path coefficient is one estimate of the amount of variance independently explained by a variable. Here GPA explains 4 percent of the variance, or nearly 10 percent of the variance accounted for by this model.

Continuing the discussion of variables related to educational career, let us skip to the fourth column of the table, which deals with enrollment in graduate school. The coefficient for this variable is .29. Next to carrying out occupational plans, attending graduate school is the most important influence on the occupational attainment of a male college graduate. Most of the indirect effects of this variable are transmitted through 1964 prestige expectations. The only nonspurious effects of degree earning (in the sixth column) are given by the direct path, which has been discussed above.

The path coefficients in the third and fifth columns of the table, referring, respectively, to prestige expectations held in 1961 and 1964, are the largest in the table. Of the variables included in this model, those referring to the conversion of plans to reality are the strongest. The closer the expectations are to the actual job, the greater their impact.

Within the limitations of this particular model, the process of occupational achievement among college graduates can be interpreted as the result of two interpenetrating causal systems, one involving career goals and the other a man's experiences and decisions in higher education. Career expectations at one point in time influence later ones as well as occupational choice. Academic performance and experiences affect each other. Career expectations influence academic decisions, and the latter, in turn, influence occupational plans and choices.

Thus, one reason why freshman expectations are such a "weak" predictor of later prestige is that the person has had many opportunities to change his mind between the two events, and his success or failure in the academic world may have influenced him to do so.

Another perspective on this matter can be gained by noting that the entire set of eight independent variables explains 43 percent of the variance in occupational attainment. This is a respectable enough figure by current standards, especially when one remembers that a major aspect of educational attainment has been controlled by sampling only college graduates.

Nevertheless, one must wonder what factors might be left out of the model, even though we need not commit ourselves to "following the mirage of 'increasing the explained variance' " (Blau and Duncan 1967, p. 203). In the first place, parental SES is not such a factor. This set of variables has been omitted from the present analysis because its effects on occupational attainment are negligible. Moreover, race can have no pronounced impact on this system. In 1961, at least, Negroes were such a small proportion of all college graduates (3 percent) that inclusion of race could have no appreciable effect on a model pertaining to the entire population.

In all likelihood, conventional measures of motivation will also be of little help. Thus, for example, one estimate of the effects of need achievement in the general population yields a direct path of about .1 (Duncan et al. 1968, pp. 131–45).

It is clear, of course, that the variables treated here are not measured as reliably as possible and that, as a result, the "true" percentage of variance explained is greater than .43. Assume that better, though not perfect, measurement might raise this figure to 50 percent. We are left with the other half and must at least consider the possibility that some kinds of chance factors account for a fair share of the remainder.

The possibility that chance is an important factor in "accounting for" the remaining half of the variance cannot be discounted, but it may be useful to speculate briefly on what its role might be. One aspect of changes in career plans is undoubtedly idiosyncratic. Thus, for example, a student may come into contact with a stimulating professor who interests him in a new field, thus causing the student to change his career intentions. It might be possible, in principle, to trace out this process on a case-by-case basis and remove it from the realm of "chance," strictly construed. On another level, however, an element of happenstance remains. To the extent that students do not know what they will be getting before they get it or cannot choose their professors, it will be an accident if someone comes in contact with a teacher who arouses his interest. The outcome of such encounters will thus remain unpredictable.

This paper has examined the role of some formal academic variables in the process of changing career decisions and the impact of these decisions on the actual occupation held by male college graduates seven years after graduation. The role of these variables is important, even though they do not completely account for changes in career decisions. The formal aspects of academia do serve to allocate men to higher or lower levels of the occupational prestige structure.

Considered as bearing on the broader process of social mobility, these data indicate that graduation from college is a prime factor in intergenerational mobility. Otherwise the role of parental SES would be stronger than it is. During and after college, men change their career intentions and behavior to such an extent that their freshman expectations are not a good predictor of the prestige of the position they will hold upon entry into the labor force. Higher education is therefore the arena for considerable "mobility" in expectations.

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Context and Consex: A Cautionary Tale[1]

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In a contextual analysis it is found that students in schools with high sex ratios have higher educational aspirations than students in schools with low sex ratios (i.e. high male-female ratios) in a population of white high-school seniors in Davidson County, Tennessee. The effect of sex-ratio context persists when sex, intelligence, and father's education are controlled. The "consexual effect" is interpreted as a consequence of anticipatory socialization. The contextual interpretation is then exposed as speculative, artifactual, and substantively trivial. Covariance analysis and dummy-variable regression analysis are advocated as more suitable techniques for the measurement and interpretation of differences among groups.

How does the high school experience affect educational aspirations? The interest of sociologists in this question has been motivated by both professional curiosity and political concern. We want to understand how stratification occurs and to eliminate unequal educational opportunity and the attendant waste of human talent. Numerous individual background factors have been found to affect aspirations for education beyond the high school level. Of these the best documented may be sex, intelligence, and socioeconomic status (Sewell, Haller, and Straus 1957). Other factors known to affect aspirations include motivational variables, family structure and interaction patterns, ethnicity and race, academic performance, and participation in athletics and other school activities. The influence of both parents and peers is well documented, although there is a controversy over their relative importance (Kandel and Lesser 1969).

A number of papers have argued that the social context of the school, the neighborhood, or the community has an independent effect on aspirations or other educational outcomes (Boyle 1966*a*; 1966*b*, Coleman 1961; Coleman et al. 1966; Krauss 1964; Michael 1961, 1966; Reiss and Rhodes 1959; Rogoff 1961; Sewell 1964; Turner 1964, 1966; Wilson 1959, 1963, 1967, app. C3). In several of these studies, school context was operationalized by grouping schools according to student body or neighborhood socioeconomic-status composition. This operation was rationalized by assuming that socioeconomic-status composition measured communicable values or attitudes which influence aspirations. For example, Wilson used

[1] I wish to express my thanks to Albert J. Reiss, Jr., and Albert Lewis Rhodes for making available the data for this analysis. Otis Dudley Duncan, Richard P. Taub, Peter M. Blau, James Fennessey, Albert J. Reiss, Jr., Donald J. Treiman, and several anonymous readers provided useful criticisms of earlier versions of this paper. James Sakoda and N Roy Kass gave expert programming assistance at the Sociology Computing Laboratory of Brown University. An intellectual debt is owed also to Edward S. Deevey for his 1959 essay on social pathology and migration among lemmings.

such a procedure to test "the proposition that the aspirations of the bulk of the students in a high school district provide a significant normative reference influencing the educational aspirations of boys from varying strata" (Wilson 1959, p. 837). Recently, the thesis that school socioeconomic contexts influence educational outcomes has been disputed by several writers (Bowles and Levin 1968; Campbell and Alexander 1965; Duncan, Haller, and Portes 1968; McDill, Meyers, and Rigsby 1967; Sewell and Armer 1966; Sewell, Armer, and Shah 1966), including myself (Hauser 1969). The critics have argued that the impact of normative phenomena on individuals cannot be assessed using an indirect indicator like socioeconomic-status composition, and a search for better indicators is in order.

Sex is conventionally used as a control variable or predictor in studies of educational performances, and there is no doubt that there are substantial sex differences in aspirations (Boyle 1966*a;* Lavin 1965, pp. 128–31; Sewell, Haller, and Straus 1957). Yet, no one has investigated the role of the sex ratio of the high school in the determination of aspirations. A comment in the review of social climate studies by Brown and House (1967, p. 400) has inspired the present effort to remedy this deficiency. In this paper the sex ratio is proposed as an alternative measure of the social context of the school, and the implications of the proposal are investigated in detail.

The sex ratio, equal to the number of males in a population divided by the number of females, has long been used by demographers as an indicator of population composition. Depending on the exact circumstances, the sex ratio may provide information about the quality of demographic data, about past mortality conditions and migration, or about the future trajectory of vital rates. It has less frequently been treated as a continuously variable aspect of social structure with immediate effects on social processes. One notable exception has been demographic treatment of the "marriage squeeze," an imbalance in the sex ratio of persons in the marriage market caused by past fluctuations in the size of birth cohorts (Glick, Heer, and Beresford 1963; Akers 1967). Of course, sociologists have not neglected the study of social organization in situations where only males or only females are present. There has been little attention, however, to the consequences of variations in the numbers of each sex in situations where both sexes are ordinarily present. Adolescent activities are highly oriented to the expectations and reactions of members of the opposite sex (Coleman 1961), and many aspects of school organization are manifestly related to the control of contact between the sexes. Thus, high-school populations should be ideal for investigating the consequences of variation in the sex ratio.

DATA

The analysis is based on data for white public high school seniors who attended schools in the Davidson County ring surrounding the city of Nashville, Tennessee. The data were obtained from self-administered questionnaires and school records in the course of a 1957 survey of all secondary-school students in Davidson County (Reiss and Rhodes 1959). The study

population included about two-thirds of the high school seniors in the Nashville metropolitan area.

The variables treated in the analysis are educational aspiration, intelligence, father's education, sex and sex-ratio context:

1. *Educational aspiration.*—Students reporting that they "wanted" to attend school beyond the high school level were coded as having "high" educational aspirations. This included a substantial number of students who aspired to less than a complete college education. Thus, the proportion of students reporting "high" aspirations in these data is greater than in other studies where a more restrictive definition of "high" aspirations was adopted or where expectations or plans, rather than aspirations, were ascertained.

2. *Intelligence.*—Otis or Kuhlman-Anderson group-administered-test intelligence quotients were obtained from school records which were matched with supposedly anonymous questionnaires by a procedure described elsewhere (Reiss and Rhodes 1959, chap. 2: 35–36). The last general administration of intelligence tests was in the ninth grade, and the large amount of missing data on this variable did present a problem. Tabulations reported elsewhere indicated that the only important correlate of missing data on intelligence was having moved in the recent past (Hauser 1968). For the present analysis, the IQ distribution for both sexes combined was collapsed into three categories of roughly equal size. Scores up through 99 were coded low; scores from 100 through 109 were coded medium; and scores of 110 and above were coded high. No scores below 50 or above 139 were reported.

3. *Father's education.*—The highest grade in regular school completed by the father was ascertained from the student questionnaires. Students whose fathers had completed eight or fewer years of school were coded as low on this variable; from nine through twelve years, medium; and more than twelve years, high. This coding procedure corresponds to conventional transition points in the schooling process; it also produced three groups of approximately equal size.

4. *Sex and Sex-Ratio Context.*—The sex of the student was ascertained from the questionnaire. Sex ratios were measured by the ratio of boys to girls among all respondents at each of the eleven schools in the Davidson County ring. The total number of students from whom questionnaires were obtained was 1,175, of whom 538 were boys and 637 were girls. The schools' sex ratios varied from 1.33 to 0.34 boys per girl. The schools were rank ordered by sex ratio and divided into "high" and "low" sex-ratio contexts; there were five schools in the former category and six in the latter. Because of the necessity of introducing multiple controls, the number of observations did not permit the creation of additional categories of the contextual variable. There were more girls than boys in both sex-ratio contexts. For the initial set of 1,175 student cases, the sex ratio was 0.93 in the high context and 0.75 in the low context.

As noted above, intelligence quotients were missing in a large number of cases, and there were also some cases where educational aspiration or

father's education had not been ascertained. In order to facilitate the presentation here, the tables below include only the 888 cases where all of the data were ascertained. For the cases used in this analysis, the sex ratio was 0.86 in the high context and 0.70 in the low context. A second version of each table was also constructed using all cases on which data were obtained for the variables used in the table, and there were no important deviations from the results reported here. It is unlikely that the missing data bias the results in any important way.

Although sex ratios varied markedly from school to school, this variation was not a result of any explicit policy with regard to admission of students. Recruitment to the eleven schools was based on neighborhood of residence. It is probable that the sex ratios of the schools varied less as a consequence of neighborhood variations in the sex ratio of persons of high school age than as a consequence of dropout, grade retardation, and enrollment in private schools. Reiss and Rhodes (1959, chap 2:10) found that on the basis of a one-year follow-up of the students covered in the 1957 Nashville survey, white boys were more likely to drop out of school than white girls. For the U.S. population it has been found that "continuation in school to completion of the secondary level varies little among the sexes and residence groups, although it tends slightly to favor girls and youths in urban areas" (Nam and Folger 1965, p. 459). In order to ascertain the plausibility of dropout and grade-retardation differentials as an explanation of school sex-ratio differences, the sex ratios for students in lower-grade feeder schools were calculated down through the seventh grade for each of the sex-ratio contexts. Within each context, the sex ratio varied inversely with grade in school, and there was no difference in sex ratio between the two contexts below the tenth-grade level.

ANALYSIS

The effect of the sex-ratio context is examined below using standard cross-tabulation techniques. The gross effect of the sex-ratio context, or the "consexual effect," is shown in table 1. While 73.5 percent of students in the high sex-ratio context aspire to education beyond the high school level, only 61.3 percent of those in the low sex-ratio context have high aspirations. The difference between these two figures, more than twelve percentage points, is probably an underestimate of the real importance of the consexual effect on educational plans and college attendance, because aspiration is an attenuated indicator of those variables. The consexual effect is slightly larger for boys than for girls, and it is almost as large when sex is controlled as in the original comparison of the contexts. It is clear, then, that the higher aspirations of boys, who are overrepresented in the high sex-ratio context, do not account for the difference in aspirations between the two contexts. A pooled χ^2 with two degrees of freedom was calculated, and the consexual effect was significant beyond the .05 level.

The consexual effect cannot, however, be accepted at face value. As Sewell and Armer (1966*b*, p. 708) stated in a reply to their critics, "it is

parsimonious to enter first those variables which are well established in the literature and are more powerful predictors rather than variables which are less well established and have weaker associations." In accord with that argument, the following strategy is adopted. First, the effects of intelligence and of father's education on educational aspiration are examined without reference to the sex-ratio context. Second, the relationships between sex-ratio context and intelligence and between sex-ratio context and father's

TABLE 1

PERCENTAGE OF HIGH SCHOOL SENIORS ASPIRING TO HIGHER EDUCATION BY SEX AND SEX RATIO OF STUDENT BODY

Sex Ratio	Male (%)	Female (%)	Total (%)
High........	83.8 (222)	64.7 (258)	73.5 (480)
Low.........	71.4 (168)	54.2 (240)	61.3 (408)
Total.....	78.5 (390)	59.6 (498)	67.9 (888)

TABLE 2

PERCENTAGE OF HIGH SCHOOL SENIORS ASPIRING TO HIGHER EDUCATION BY SEX AND INTELLIGENCE

Intelligence	Male (%)	Female (%)	Total (%)
High	85.7 (133)	76.4 (165)	80.5 (298)
Medium.. .	79.7 (118)	61.7 (154)	69.5 (272)
Low.........	70.5 (139)	42.4 (179)	54.7 (318)
Total....	78.5 (390)	59.6 (498)	67.9 (888)

education are examined. Third, the consexual effect is examined again under controls for intelligence and for father's education. When neither of these partialing operations eliminates the consexual effect, controls for intelligence and for father's education are introduced simultaneously.

The results of the first stage of the analysis are shown in tables 2 and 3. There is nothing surprising in the finding that both intelligence and father's education have positive effects on aspirations for education beyond the high school level for both boys and girls. The difference in percentages

with high aspirations between the high and low categories of intelligence is twenty-five percentage points, and between the high and low categories of father's education, the difference is thirty-three percentage points. Both intelligence and father's education appear to have stronger effects on the aspirations of girls than on those of boys. For boys, the percentage-point differences in aspirations between the high and low categories of intelligence and father's education are fifteen and twenty-seven points, respectively, while for girls, they are thirty-four and forty-six points.

The relationship between sex-ratio context and intelligence is shown in table 4. While students in the high sex-ratio context may be slightly more intelligent than students in the low sex-ratio context, it is unlikely that the consexual effect is explained by the differences in the intelligence of students in the two contexts. For both sexes combined, there are about 5

TABLE 3

PERCENTAGE OF HIGH SCHOOL SENIORS ASPIRING TO HIGHER EDUCATION BY SEX AND FATHER'S EDUCATION

Father's Education	Male (%)	Female (%)	Total (%)
High........	93.3	87.3	89.6
	(75)	(126)	(201)
Medium.....	82.4	56.8	68.2
	(171)	(213)	(384)
Low.........	66.0	41.5	53.1
	(144)	(159)	(303)
Total.....	78.5	59.6	67.9
	(390)	(498)	(888)

TABLE 4

INTELLIGENCE OF HIGH SCHOOL SENIORS BY SEX AND SEX RATIO OF SENIOR CLASS

	Intelligence			
Sex and Sex Ratio	High (%)	Medium (%)	Low (%)	Total (%)
Male:				
High..........	33.8	29.3	36 9	100.0 (222)
Low..	34.5	31.6	33.9	100.0 (168)
Female:				
High..	37 6	28.7	33 7	100.0 (258)
Low...	28.4	33.3	38.3	100.0 (240)
Total:				
High........	35.8	29.0	35.2	100.0 (480)
Low.........	30.9	32.6	36.5	100.0 (408)

percent more students with high intelligence in the high context than in the low context. Further examination of the table indicates that this is entirely attributable to the higher intelligence of girls in the high sex-ratio context; there is a slight tendency for the boys in the low sex-ratio context to be more intelligent. One might become flippant at this point and suggest that the more intelligent members of each sex go to schools where the sexual situation is more favorable to them, but such a conclusion would require a novel interpretation of the way in which students are allocated among high schools. Moreover, the observed differences in intelligence are quite small.

TABLE 5

EDUCATION OF FATHERS OF HIGH SCHOOL SENIORS BY SEX AND SEX RATIO OF SENIOR CLASS

	Father's Education			
Sex and Sex Ratio	High (%)	Medium (%)	Low (%)	Total (%)
Male:				
High..........	23.5	43.2	33 3	100.0 (222)
Low...... ...	13.7	44.6	41.7	100.0 (168)
Female:				
High..	34.9	40.3	24.8	100.0 (258)
Low....	15.0	45.4	39.6	100.0 (240)
Total:				
High	29.6	41.6	28.8	100 0 (480)
Low...... ...	14.5	45.1	40.4	100.0 (408)

When the relationship between the sex-ratio context and father's education is examined, the necessity of controlling for the latter variable becomes obvious. These results, shown in table 5, suggest that the consexual effect may be a result of differences in the level of father's education between the two contexts. For the total study population and for each sex considered separately, the fathers of students in the high sex-ratio context had more education than the fathers of students in the low sex-ratio context. There were 15 percent more students whose fathers had more than a high school education in the high context than in the low context, and there were 11 percent more students whose fathers had no more than a grammar school education in the low context than in the high context. The effect of school dropout on sex ratios provides a likely explanation of the difference in socioeconomic level between the two contexts. Boys are more likely to drop out of school than are girls, and socioeconomic status is inversely correlated with the probability of dropping out of school. Dropout lowers the sex ratio of high school student bodies, and the sex ratio is lowered most in the schools with lower-status students. Hence, schools with low sex ratios also have student bodies with low socioeconomic status. Differences in the sex ratio between the two contexts and in the frequency distributions of father's

education are probably dampened by a movement of high-status boys int private schools. Indirect evidence for this last observation may be found i a comparison of the distributions of father's education for boys and fo girls in the high context (in table 5) or in a comparison of sex ratios (no shown) within categories of father's education. School dropout and private school enrollment may exert contrary influences on sex-ratio differential between high- and low-status schools.

In table 6, the relationship between the sex-ratio context and educationa aspiration is examined with intelligence controlled. As one would expec

TABLE 6

PERCENTAGE OF HIGH SCHOOL SENIORS ASPIRING TO HIGHER EDUCATION BY SEX, INTELLIGENCE, AND SEX RATIO OF SENIOR CLASS

	INTELLIGENCE		
SEX AND SEX RATIO	High (%)	Medium (%)	Low (%)
Male:			
High	92.0 (75)	87.7 (65)	73.2 (82)
Low.......	77.6 (58)	69.8 (53)	66.7 (57)
Female:			
High......	79.4 (97)	64.9 (74)	48.3 (87)
Low..... ..	72.0 (68)	58.8 (80)	37.0 (92)
Total:			
High.. .	84.9 (172)	75.5 (139)	60.4 (169)
Low.....	74.6 (126)	63.2 (133)	48.3 (149)

from the results in table 4, the consexual effect persists when intelligence i controlled. For the total population there is a ten to twelve percentage point difference in aspirations between the high and low sex-ratio context within each category of intelligence. There is a reduction in the effect withi the medium and low categories of intelligence for boys and within the hig and medium categories of intelligence for girls, but it is in no case less tha six percentage points. For boys of high intelligence and girls of low intelli gence, the effects are fourteen and eleven percentage points, respectively suggesting that there may be some interaction in the relationships of intelli gence and sex-ratio context to aspiration. To test for the significance of con sexual effects within categories of sex and intelligence, a pooled χ^2 with si degrees of freedom was calculated, and it was significant beyond the .0 level.

In table 7 the effect of the sex-ratio context on educational aspirations i

examined with father's education controlled. The size of the consexual effect clearly depends on the educational level of the father, but controlling for father's education does not eliminate the effect. The size of the consexual effect varies inversely with the level of father's education. For the total population, the effect is fourteen percentage points in the high father's-education category, nine percentage points in the medium category, and two percentage points in the low category. The same inverse pattern is reproduced for each sex separately. However, the consexual effects are consistently smaller for girls than for boys within each category of father's

TABLE 7

PERCENTAGE OF HIGH SCHOOL SENIORS ASPIRING TO HIGHER EDUCATION BY SEX, FATHER'S EDUCATION, AND SEX RATIO OF SENIOR CLASS

	Father's Education		
Sex and Sex Ratio	High (%)	Medium (%)	Low (%)
Male:			
High......	100.0	86 4	68.9
	(52)	(96)	(74)
Low.......	78.3	77.3	62.8
	(23)	(75)	(70)
Female:			
High......	90 0	59.6	37 5
	(90)	(104)	(64)
Low.......	80.6	54.1	44.2
	(36)	(109)	(95)
Total:			
High....	93.7	72.5	54.3
	(142)	(200)	(138)
Low.....	79.7	63.6	52.1
	(59)	(184)	(165)

education, and the effect is actually negative for girls whose fathers had no more than a grammar-school education. For the five comparisons within categories of sex and father's education which confirm the pattern of previous results, a pooled χ^2 with five degrees of freedom is significant beyond the .05 level. The reversal of the consexual effect for girls in the low father's-education category is not significant at the .05 level.

Since the consexual effect persists under controls for sex, intelligence, and father's education, controls for all of those variables are now introduced simultaneously, as shown in table 8. These results are ambiguous because of the interaction between sex-ratio context and father's education and because of the small number of observations per cell. Looking first at the results for both sexes combined, it can be seen that the direction of the original consexual effect has been preserved in every category of intelligence and father's education. In several cells, however, the differences are small. They

are about a single percentage point for students whose fathers had low education and who have low or medium intelligence and for students whose fathers had medium education and who have high intelligence. In other cells, the consexual effect ranges from seven to more than thirty percentage points.

The results are less clear when the sexes are examined separately. For boys, there is a reversal in the consexual effect when both father's education and intelligence are low, and there is no difference when father's education

TABLE 8

PERCENTAGE OF HIGH SCHOOL SENIORS ASPIRING TO HIGHER EDUCATION BY SEX, FATHER'S EDUCATION, INTELLIGENCE, AND SEX RATIO OF SENIOR CLASS

	Father's Education								
	High			Medium			Low		
	Intelligence			Intelligence			Intelligence		
Sex and Sex Ratio	High (%)	Medium (%)	Low (%)	High (%)	Medium (%)	Low (%)	High (%)	Medium (%)	Low (%)
Male:									
High..	100.0	100.0	100.0	87.5	91.2	80.0	81.8	77 3	61 0
	(32)	(9)	(11)	(32)	(34)	(30)	(11)	(22)	(41)
Low...	88.9	100 0	50.0	84.8	83.3	62.5	56.2	55 2	76 0
	(9)	(6)	(8)	(33)	(18)	(24)	(16)	(29)	(25)
Female:									
High..	90.9	91.7	86.4	70.7	61.3	43.8	66.7	36 8	27 3
	(44)	(24)	(22)	(41)	(31)	(32)	(12)	(19)	(33)
Low...	86.7	78.6	71.4	71.4	50.0	41.2	61.1	61 5	29 4
	(15)	(14)	(7)	(35)	(40)	(34)	(18)	(26)	(61)
Total:									
High	94.7	93.9	90.9	78 1	76.9	61 3	73 9	58.5	45 9
	(76)	(33)	(33)	(73)	(65)	(62)	(23)	(41)	(74)
Low	87.5	85.0	60 0	77.9	60.3	50 0	58 8	58 2	44 7
	(24)	(20)	(15)	(68)	(58)	(58)	(34)	(55)	(76)

is high and intelligence is medium. However, the first reversal of the consexual effect also involves a reversal in the main effect of father's education within categories of intelligence, and the second is based on a total of fifteen cases. The consexual effect is positive in the other seven categories of intelligence and father's education, for boys, and the differences between the high and low sex-ratio contexts range from two to fifty percentage points. The latter extreme, it should be noted, is based on a small number of cases. For girls there are reversals in the low father's-education, low- and medium-intelligence categories and in the medium father's-education, high-intelligence category. The first and third of these reversals involve combinations of intelligence and father's education for which the evidence of a consexual effect among boys was either negative or equivocal. The reversal for girls in the low father's-education, medium-intelligence category involves a reversal

, the main effect of father's education within the medium-intelligence ategory. In the remaining cells, the consexual effects are generally smaller or girls than for boys.

To summarize, when sex, intelligence, and father's education are controlled, the consexual effect appears in thirteen out of eighteen possible omparisons. There is a tie in one case, and the remaining five cases are eversals. Using the sign test, it was determined that such a result would ave occurred fewer than five times in one hundred if the direction of the onsexual effect were a random occurrence. There is tangible evidence, then, hat the consexual effect persists under stringent controls.

NTERPRETATION

ubstantive interpretation of the consexual effect was postponed to this oint because it was hardly worth discussing an effect whose existence was n doubt. Given the preceding analysis, such a discussion is very much in rder, both because of its sociological interest and because of the relative ase with which the sex ratio may be manipulated for policy purposes.

It is generally recognized that status within the student subculture is ore closely related to dating, popularity, and athletic prowess than o academic performance (Coleman 1961). The emphasis on dating and opularity may be most relevant here. Most of the Davidson County udents attended schools where there were more girls than boys. Nonetheless, there was considerable variation in the sex ratios of the high schools, nd it is not unreasonable to suppose that this had an impact on the extent f opportunities for success within the adolescent society. Where there are ew boys, they have a relative advantage in the "rating-and-dating game," nd where there are many boys, they are at a relative disadvantage. Similarly, the chances for girls' success in the adolescent status system are related nversely to their share of the student population.

The boys in schools with high sex ratios are faced with a situation in hich the attainment of a subculturally approved goal, popularity, is prevented by a scarcity of legitimate means, namely, girls. The boys' situation, hen, fits Merton's (1968, pp. 185–214) deviance paradigm. The outcome a form of rebellion, where both the goals and means of the adolescent ociety are rejected in favor of alternative goals and means. One salient lternative goal is success in life after high school, and for boys this means ompetition in the realm of higher education and in the occupational ystem. The consexual effect, then, is an example of anticipatory socialization to the adult stratification system which is brought about by a scarcity f opportunities for success within the adolescent society. It is not necessary nder this explanation to identify particular boys who experience failure in he adolescent status system and consequently change their goals. More robably, adult educational and occupational goals are recognized as a egitimate alternative by all boys to the extent that failure in the rating-and-dating game is perceived as a real possibility.

If this argument applied in exactly the same fashion to girls, one would

expect the consexual effect to work in opposite directions for boys and for girls. That is, girls would have fewer chances for success in the adolescent society and higher educational aspirations where the sex ratio is low than where it is high. However, the problems created by variation in the sex ratio are not the same for boys and for girls. Within the context of the adolescent society, the social standing of boys is based on their ability to interest and attract girls in approved ways, and this obviously differs from the conditions for their success in the larger society. For girls, on the other hand, the conditions for success in the two situations are the same. That is, success in the adolescent society and in adult society is based on appeal to men. The educational aspirations of boys are based on the implications of educational achievement for occupational achievement, while those of girls are based on the implications of educational achievement for the attraction of a suitable husband. If potentially successful boys are planning on college, then girls must do the same or risk failure in the marriage market. It is likely, then, that the depressing effect of a high sex ratio on the educational aspirations of girls is more than countered by the opposite effect of girls' perceptions of boys' aspiration levels. Girls raise their own aspiration levels when they realize that a large number of their male classmates want to go to college. The level of the sex ratio has contradictory implications for the level of girls' aspirations by virtue of its opposite effects on chances for immediate success within the adolescent status system and for long-run success through the attraction of a high-status marriage partner. This interpretation is quite consistent with the generally lower magnitude of the consexual effect for girls than for boys.

One other comment may be directed to the variation of consexual effects observed in tables 6, 7, and 8. The effect was generally stronger for bright, high-status students, especially boys, than for students of low-ability and low-origin status. This may indicate that the better-endowed students have a weaker initial commitment to the adolescent society and that they are more likely to perceive the possibilities and advantages of adopting the dominant values of the adult stratification system. In contrast, there is little possibility for the low-status boys and girls to rebel in this direction. Their rebellion may lead to the adoption of behaviors like delinquency and school dropout, rather than the generation of high educational aspirations. Alternatively, they may engage in ritualized efforts to achieve status through the rating-and-dating game in spite of their reduced chances for success.

POLICY IMPLICATIONS

Despite the preliminary character of these findings, it may be useful to suggest some policy implications of the consexual effect. It is rare, after all, that sociologically relevant variables are as conducive to deliberate manipulation as is the sex ratio, whose numerator and denominator are both subject to migration. The stakes here are not small. For example, an extrapolation from table 1 indicates that nearly 89 percent of boys would have high

aspirations if the sex ratio were unity, while less than 55 percent would have high aspirations if the sex ratio were one-half. It is assumed for the present purpose that the goals of American society include the creation and maintenance of equality of opportunity for educational and occupational achievement and the support of other social policies conducive to widespread moral and material satisfaction.

Recently, it has been suggested (Porter 1968) that there is an incipient shortage of highly motivated youth who can be recruited into the key occupations which require advanced education. Deliberate manipulation of the sex-ratio context may be one way of increasing opportunities and of alleviating the deficit of motivation. That is, the existence of the consexual effect suggests that it may be desirable to control the sex ratio in the secondary schools. Of course, such a policy may require some changes in the role of women in American society, and the exact costs and benefits of maintaining a given sex ratio require further study. It may be, for example, that the positive consexual effect is limited to a certain range of the sex ratio in the neighborhood of unity. It may even be that too high or too low a sex ratio eliminates the adolescent subculture altogether.

Given the goal of increasing the sex ratio in secondary school, there are only two means by which it may be accomplished—increasing the number of boys or decreasing the number of girls. The former appears at first to be the more viable alternative, since boys in high school represent a smaller proportion of their birth cohorts than do girls. However, the greatest long-run gains may not follow from direct efforts to improve high school retention rates for boys. Of course, it is desirable to continue to improve action programs to reduce dropout among high school boys, but such programs have been of limited effectiveness in spite of the substantial resources devoted to them. A major economic depression might have a more salutary effect on high school sex ratios than any current or prospective antidropout measures (Duncan 1965). Economic depression is not advocated here as a means of upgrading the educational attainment of the male population. Thus, increasing male enrollment in secondary school does not appear to be a viable means of increasing the sex ratio.

The alternative is the elimination of some women from the high school. While measures to this effect may superficially appear to be in contradiction to major values of American society, closer consideration leads to the opposite conclusion. For most women, educational attainment is useful only as a means to the attainment of status through marriage (Blau and Duncan 1967, pp. 346–59; Warren 1966). If that drain on educational resources were plugged, they might be diverted to the more productive business of educating men. If the consexual effect exists prior to the senior year of high school, a reduction in the proportion of women continuing beyond the elementary or junior high school level would improve male school retention within the high school years as well as in the transition from secondary to higher education. It is hard to believe, however, that the consexual effect would appear during the period of sexual latency, and there is probably no advantage in the elimination of elementary education for women. More-

over, the secondary and higher education of women need not be eliminated, but only postponed, for the desirable consequences of the consexual effect to be felt.

Those consequences might be as beneficial to women as to men. For example, a pattern of mate selection not based on matching educational accomplishments at the time of marriage would tend to increase the flow of intergenerational mobility for women. Further, much of the frustration of married women in the child-bearing years is based on their having been overtrained for child care. A postponement of secondary and higher education would eliminate that source of their frustration. It would also take pressure off undertrained men in the job market, who would not have to compete with married women while the latter were attending school.

This discussion of goals should be complemented by a discussion of means. It is likely that only a moderate decrease in female school retention need occur for the consexual effect to operate to greatest advantage. Indeed, the discussion above is unnecessary to the extent that the end of increased male educational attainment may be accomplished by means of a partial segregation of the sexes by school. Such a segregation could be accomplished by designating some schools for coeducation and others for female education alone. While transportation could become a problem in establishing such a system, it is doubtful whether it would create the same degree of discord as recent efforts to eliminate racial imbalance in the schools. The sanctity of the concept of the neighborhood school would probably not withstand an argument for change based on the preservation of the intellectual or physical chastity of American girls.

Another alternative is the drafting of girls of high school age into the armed forces or some other service organization to perform clerical tasks and receive practical training. Finally, and as a long-run possibility requiring further study, there is the possibility of deliberately altering the sex ratio of the population as a whole; this might be accomplished by means of biochemical control of the genetic processes of sex determination.

RETROSPECT

The title of this article, if nothing else in it, should have alerted the reader that the preceding is not a serious argument for the effect of high school sex ratios on educational aspirations. To paraphrase Deevey (1959), whatever the merits of such an argument, there is not a scrap of direct evidence for it here. The analysis was generated only to illustrate an error which is commonly made in shifting from individual to aggregate units of analysis. We can call this error the contextual fallacy, although equally deficient versions of the same technique have appeared under other names (Blau 1957, 1960; Davis, Spaeth, and Huson 1961; Tannenbaum and Bachman 1964; Riley 1964). The several types of contextual analysis share a common concern with the problem of demonstrating that "the group" produces differences in some individual variate. The method has theoretical and empirical weaknesses which make it worthless for that purpose. The contextual

fallacy is a not very distant cousin of the aggregative or ecological fallacy (Robinson 1950), since both involve misinterpretation of the between-group or ecological correlation (Hauser 1969). The contextual fallacy occurs when residual differences among a set of social groups, which remain after the effects of one or more individual attributes have been partialled out, are interpreted in terms of social or psychological mechanisms correlated with group levels of one of the individual attributes. This rather complicated statement is elaborated below by means of a verbal and statistical reanalysis of the Nashville data.

A horizontal reading of table 1 shows the direct effects of sex on aspirations for the total population and within each sex-ratio context. A vertical reading shows the effects of the sex-ratio context for the total population and for each sex separately. In interpreting the table, we give priority to sex. That is, we assign part of the total difference in aspiration levels between the two contexts to the combination of the individual sex differences in aspirations within contexts and the differing proportions of each sex in the two contexts. Therefore, we examine differences in aspiration levels between the two contexts for each sex separately to determine whether the consexual effect is large enough to be worth discussing.

The question now arises, is it correct to interpret the net effects of the contextual variable as effects of the sex ratio? Obviously, they are not effects of sex itself, since sex is fully controlled in the table. But several objections to their interpretation as effects of the sex ratio may be posed.

If the consexual effect worked as described above, the results of table 1 offer no assurance that the residual differences in aspirations between the two contexts were not artifactual consequences of group differences in composition on other individual variables. Student body composition with respect to intelligence and socioeconomic background, for example, could not cogently be interpreted as consequences of the sex-ratio context, but their effects are ignored in table 1. Of course, this is the reason for controlling intelligence and father's education in the earlier analysis.

It is questionable whether one would want to make much of the consexual effect after measuring its strength in table 8 as opposed to its statistical significance. Leaving that issue to one side, even if the controls for sex, intelligence, and father's education had not virtually eliminated the consexual effect, the analysis would remain vulnerable to the objection that other relevant individual variables had been left out. In a purely logical sense this objection can never be met because there are always "other" variables. From a practical standpoint, the objection means that one should be prepared to argue that his theory of relations among individual attributes is complete and correct, or at least defensible in relation to some explicit criterion, before speculating about residual group differences. It would be difficult to argue that the combined influences on aspirations of sex, intelligence, and socioeconomic status are a "theory" in this sense, and we have some evidence that they are not. For example, the combination of several socioeconomic background factors, intelligence, performance in school, and parental achievement expectations fails to account for the

common content of educational and occupational aspirations in the Nashville study population (Hauser 1969), and similar findings have been reported for rural Wisconsin youths (Sewell, Haller, and Portes 1969). The general recognition that a particular set of variables is "important" is no justification for their use as a theoretical foil.

The most important variables in the consexual explanation were not measured at all. The interpretation depends on the propositions (*a*) that boys and girls who cannot find dates in high school will want to go to college, and (*b*) that girls who like college boys will want to go to college. The propositions may or may not be plausible, but the relevant variables were not even measured. The propositions are testable, and they might have accounted for residual differences in aspirations between the two contexts, but the assertion that they do so is purely speculative. Far from being a "group-level" explanation, the consexual effect depends on an untested set of propositions about individual attributes.

The identification of the contextual variable with variation in the sex ratio is not persuasive. The contexts were formed by grouping schools according to their sex ratios, but the difference in composition by sex between the two contexts is actually rather small. For the original 1,141 cases with aspiration reported, the fourfold point correlation between sex and sex-ratio context was an unimpressive 0.045, and for the 888 cases treated here, it was 0.049. Of course the relation between the sex ratio and residual group differences in aspirations was perfect, but this could be said about any aspect of group composition, since there were only two categories of the contextual variable. We might equally well have identified the classification of schools with the socioeconomic context, since the variability in father's education between contexts was more pronounced than that in the numbers of each sex. When father's education was coded as an interval variable, its zero-order correlation with the sex-ratio context was 0.192 for the 888 cases. How different would the interpretations of the data have been if the contextual variable had been identified with the socioeconomic context rather than the sex-ratio context?

In short, the contextual method rests on the arbitrary identification of residual group differences in the dependent variable with correlated aspects of group composition on an independent variable. Regardless of the number of categories of the contextual variable, group composition on an individual predictor may be correlated with residual differences among the groups on the dependent variable. The only way to eliminate such correlations is to assign individuals randomly to groups, and this is impossible with observational data. It is only the nonrandom assignment of individuals to groups which permits the identification of contexts with group composition on specific predictor variables.

Finally, the sex-ratio context explains little of the variation in aspirations. The four-fold point correlation between sex-ratio context and educational aspirations is 0.140, which accounts for less than 2 percent of the variance in aspirations. When sex, intelligence, and father's education are entered as predictors in a multiple regression equation, they account for 15.4 percent

of the variance in aspirations. The addition of the sex-ratio context to the regression equation increases the explained variance only to 15.9 percent. The increment in explained variance is statistically significant at the .05 level, but it is hardly of much substantive importance.

In fact the grouping of schools to form categories of the contextual variable yields an underestimate of the amount of variation in aspirations which does occur from school to school. Presumably, it is this actual variation in the dependent variable among social units which the contextual analysis attempts to locate and interpret; yet the contextual method eliminates much of it. When each of the eleven schools is treated as a separate unit with its own additive effect on aspirations, we find that the zero-order effects of the schools account for 14.0 percent of the variance in aspirations, while the sex-ratio context accounted for only 2 percent. Further, the additive effects of the schools add 6.2 percent to the 15.4 percent of the variance explained by sex, intelligence, and father's education, compared with one-half of 1 percent added by the sex-ratio context.

IMPLICATIONS

Where does this leave the problem of finding and interpreting group effects? A few suggestions can be offered.

The temptation to identify differences among groups with the social, and differences among individuals with the psychological, should be resisted. The difference between sociology and psychology does not rest on an arbitrary division between two levels of measurement and aggregation but on the kinds of explanatory mechanisms which are actually used. To the extent that contextual analyses are intended to demonstrate that sociology has a subject matter, they are a waste of time and effort. In fact, such efforts are a losing proposition, since individual differences are almost invariably larger than group differences, and covariation of individual attributes is a legitimate indication of social processes. By the same token, it is not necessary to control for individual attributes when you are really interested in the covariation of structural or aggregate variables. Such controls may be desirable when the object is to find out how structural or aggregate variation occurs, but this is not ordinarily the case in contextual analysis.

The exact meaning of "group effect" needs specification in each research situation. The present discussion, like earlier expositions of contextual method, is directed to the analysis of cross-sectional differences among social units of a given kind. But the same term can also refer to changes which occur with membership in a group over a period of time or to differences between persons who belong to a particular kind of group and those who do not. These three denotations are empirically distinct, but they are often confused in discussions of group effects.

Finally, appropriate methods for analyzing group differences are available in the form of covariance analysis and multiple regression analysis with dummy variables. Several lucid explanations of these techniques have

appeared recently (Schuessler 1969; Cohen 1968; Fennessey 1968), and they are also treated in several statistics texts. A computer large enough to produce moderately complicated cross-tabulations can readily be programmed to perform covariance analysis and dummy-variable regression analysis. In either of these methods, the group with which each individual case is associated is simply treated as a variable, like any other predetermined variable, which can influence the dependent variable. The discussion above has proceeded under the assumption that the individual predictor variables have exactly the same influence within every group and that the unique effect of the group is just an additive increment or decrement. However, covariance and dummy-variable regression analysis also permit the assumption that group membership interacts with other variables, that is, that the individual predictors have effects which vary from group to group. Of course, these techniques provide no easy solution to the problem of identifying the factors which do produce residual differences among groups. Their use does improve the measurement of group differences, and it does discourage unwarranted speculative interpretations of those differences.

Contextual analysis provides no special insight into processes determining group differentiation. On the contrary, the contextual fallacy is based on a failure to generate adequate multivariate explanations of social processes from measurements on individuals. It is possible to generate "contextual effects" at will. In general, their magnitude will be inversely proportional to the adequacy and completeness of the underlying model of relationships among individual attributes. In the present case, it is possible to demonstrate the "effects" of the socioeconomic context, the ability context, the sex-ratio context, and the "context" created by any other variables related to any other determinants of educational aspiration. Such exercises are fruitless, and the sociological literature would benefit from their absence.

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Selection and Context as Factors Affecting the Probability of Graduation from College[1]

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This study focuses on the relation of type of college attended to graduation as a factor in the educational selection process. The analysis is based on a sample of Wisconsin males who were followed up seven years after graduation from high school. Because different types of institutions select different types of students, it is necessary to control relevant student characteristics to determine the existence of contextual effects. A stepwise multiple regression analysis shows that type of college attended explains a small but significant proportion of variance in college graduation beyond what can be accounted for by measured intelligence, rank in high school class, socioeconomic background, and level of occupational aspiration in high school. Other findings are that different types of colleges have different effects for students of different socioeconomic status and intelligence levels and that the selection process into different types of schools has some effect on the overall educational selection process.

Sociologists have often noted the important role of the educational system in advanced industrial societies for the processes of status allocation and social mobility. Studies of the American labor market as well as American educational ideology stress that a college education is increasingly a prerequisite to attainment of the most desirable positions (see U.S. Department of Health, Education, and Welfare 1964). Much research in the last two decades has explored the selection processes between high school and college. Primary attention has been devoted to the educational aspirations of high school seniors and to the characteristics of those enrolling in college (e.g., Warner, Havighurst, and Loeb 1944; White 1952; Wolfle 1954; Sewell, Haller, and Strauss 1957; Sewell 1964; Turner 1964; Sewell and Armer 1966; Sewell and Shah 1967, 1968*a* and 1968*b*).

Fewer studies have focused on persistence in college, that is, on the selection processes by which individuals are sorted into those who drop out of college and those who graduate (Iffert 1958; Darley 1962; Summerskill 1962; Eckland 1965; Sewell and Shah 1967; Panos and Astin 1968). This is

[1] The research reported in this paper was financed by a grant from the National Institutes of Health, U.S. Public Health Service (M-6275). We acknowledge the services of the University of Wisconsin Computing Center and the University of Hawaii Computing Center and wish to thank Otis Dudley Duncan, George Bohrnstedt, and Vimal P. Shah for their helpful comments on an earlier draft of this paper.

true even though a high proportion (30–60 percent) of those enrolling in colleges do not complete their bachelor's degree and despite indications that obtaining the degree is of critical importance for obtaining a position of high social status (Eckland 1965). The study reported here focuses on selection after entering college.

Most studies of persistence in college have concentrated on the influence of individual characteristics such as sex, academic ability, and socioeconomic background. Virtually unexamined is the influence of institutional characteristics on the persistence of students. Yet one of the most striking features of American higher education is the variety of institutions which exist. American colleges differ in their characteristics, but little is known about the consequences of these differences for the life chances of students in the higher educational system. This study explores the relationship of the type of college attended to graduation from college.

Recent work indicates that institutional characteristics do influence the probability that students will continue their education into graduate and professional school (Astin 1962, 1963; Thistlethwaite 1965; Davis 1966). However, few studies focus on the relation between type of college attended and withdrawal from college. In one study Iffert (1958) followed a national sample of freshman men for a period of four years in an attempt to determine the relative holding power of different types of institutions. Technological institutions graduated the highest proportion of their male entrants, followed by liberal arts colleges and universities, while teachers colleges graduated the lowest proportion. In general, public institutions were found to have lower graduation rates than private schools (Iffert 1958, pp. 16–18).

Unfortunately, comparing the proportions of college entrants who eventually graduate from those institutions does not give a good estimate of institutional differences in the probability of graduating. In the first place, schools recruit students selectively; individuals are not randomly distributed. Selection takes place on the basis of a variety of student background characteristics. Since many of these student characteristics are related to persistence in college, differences in graduation rates may reflect differences in the types of students recruited more than differences between types of schools. The present study aims to determine whether institutional differences in graduation rates persist after controlling for relevant background characteristics of students.

A second difficulty in determining probabilities of graduating from different institutions stems from the fact that, of those students who enter a school, the actual percentage graduating in a given time period will reflect the proportion still attending college and the proportion who transferred to other schools, as well as the proportion who dropped out of college. In the present study those students who transferred or who were still attending college are eliminated from the sample and thus from the base when computing graduation rates of institutions. Institutional differences in transfer ratios and in attendance in college over an extended time are regarded as interesting research questions requiring a separate analysis. The findings reported here reflect institutional differences in the graduation of those stu-

dents who do not transfer from their first college and who are not attending college seven years after graduation from high school.

A more recent attempt to study the effect of type of institution attended on persistence in college is that by Panos and Astin (1968). A set of environmental characteristics of colleges, mainly interpersonal relations in the college and in policy orientations of administrators, was found to have little effect on whether a student completed four years of college over a four-year period, after controlling for student input characteristics. Their study differs from the one reported in this paper in the type of college variables studied and in the definition of persistence in college.

STATEMENT OF PURPOSE

The purpose of this paper is to examine the relation of type of college attended to graduation. Four specific questions will be explored: (1) Do different types of colleges recruit students with different characteristics, and are these characteristics related to the probability of graduating from college? (2) Are there institutional differences in graduation rates which cannot be accounted for by the background characteristics of students or by differential rates of students transferring or students with extended undergraduate careers? (3) From what types of schools do students of different intelligence and socioeconomic levels experience the greatest probability of graduating? (4) Does the process of selection into institutions influence the probability of completing college beyond the effects of different college contexts? Are students of different intelligence and socioeconomic status distributed among institutions in accordance with their chances of graduating from them?

THE DATA

The data available for this study are based on a one-third probability sample of all 1957 high school seniors in the state of Wisconsin. Numerous items of information were obtained from a questionnaire administered in the high schools, from high school records, and from a statewide testing program. In June 1964, a follow-up study was conducted by mail questionnaire sent to the parents of the students to determine the students' post-high school educational and occupational achievements. A final response rate of 87.2 percent was obtained, and a subsequent analysis indicated that there is no response bias in the follow-up on a large number of important characteristics. (For more detail on the follow-up procedure, see Sewell and Shah 1967.)

The present study is based on the data in the follow-up study of men who attended a four-year college between 1957 and 1964. The regional nature of the sample may limit the generalizations possible from these findings, for the higher educational opportunities available in a state undoubtedly influence who goes to college and who successfully completes a degree. Wisconsin compares favorably with most states in the number and diversity of opportunities it provides.

The students in this sample attended 126 institutions, most of which were attended by a single respondent, with a few schools attended by a large number. Three institutions were attended by a sufficient number to permit viewing their graduation rates individually with some confidence of reliability. These are a high-prestige state university (University of Wisconsin, Madison), attended by 281 respondents; an urban state university (University of Wisconsin, Milwaukee), with 132 respondents; and a Catholic urban university (Marquette University), with 104 respondents.

The remaining 123 institutions have been grouped into categories in order to obtain a sufficient number of respondents to permit analysis. The categories used in such an analysis should be homogeneous, containing schools of a similar type, while distinguishing between major characteristics of institutions which are likely to influence the quality of experience and chance of completing college. Many of the major differences between institutions are found in the distinctions between state colleges, universities, liberal arts colleges, and technical and professional schools. A standard source on colleges and universities (Irwin 1960) was used to categorize the remaining institutions in this way.[3]

The nine state colleges (currently known as Wisconsin State Universities) attended by 394 respondents constitute an important and homogeneous category of institutions. These schools are administered as a single system and they have similar facilities and curricula and recruit similar students. Historically these schools have served as teacher-training institutions, though more recently they have expanded their curricula. They are mostly undergraduate institutions and have relatively low admission requirements.

Universities are schools with large enrollments and diversified curricula, including substantial graduate programs which offer doctorates. All of the universities attended by students in this sample, except for the three specific schools mentioned above, were outside Wisconsin and are designated out-of-state universities. Most of the 92 respondents attending these schools were enrolled in other Big Ten universities which have relatively high admission standards.

Liberal arts colleges characteristically have small enrollments, little or no graduate program, and a general as opposed to a professional or technical curriculum. They are usually privately owned and controlled and are more expensive than state-supported schools. One problem in generalizing about liberal arts colleges, however, is the marked differences in quality among them. In view of this, two categories of this type of school are used in this

[3] A question may be raised as to why three individual institutions are separated from the general categories in this analysis. The major justification stems from the disproportionately large number of respondents who attended these schools. If these schools were placed in the general categories, the general categories would almost exclusively reflect the effects of these particular schools and obscure the general effect of schools in the category. A further reason for viewing these schools separately is the substantive interest in the effect of attending these particular institutions for this sample. Analogous institutions could probably be specified for students in other states.

analysis: *good* liberal arts colleges (93 respondents) and *other* liberal arts colleges (93 respondents).[8]

Finally, a residual category of other four-year colleges yielded 62 respondents. Schools in this category generally have a specific curriculum which is vocationally oriented. Technical institutes and religious training schools predominate, though art, music and other types of schools are also included here. While this category is more heterogeneous than is ideal, there are too few respondents attending these schools to make further distinctions.

In summary, the 126 institutions are grouped into eight nominal categories: high-prestige state university (University of Wisconsin, Madison), urban state university (University of Wisconsin, Milwaukee), state colleges (Wisconsin State Universities), Catholic urban university (Marquette University), out-of-state universities (mainly other Big Ten universities), good

TABLE 1

PERCENTAGE OF THOSE ENTERING EACH TYPE OF COLLEGE WHO DROPPED OUT, TRANSFERRED, WERE STILL ATTENDING, OR HAD GRADUATED BY 1964*

Type of College	Dropped Out	Transferred	Still Attending	Graduated	Total	N
High-prestige state university	21.8	17.0	4.5	56.7	100.0	358
Urban state university	47.8	20.7	7.6	23.9	100.0	184
State colleges	38.8	15.9	9.6	35.7	100.0	529
Catholic urban university	20.3	14.9	3.9	60.9	100.0	128
Out-of-state universities	28.3	23.9	7.5	40.3	100.0	134
Good liberal arts colleges	11.6	26.9	1.5	60.0	100.0	130
Other liberal arts colleges	28.7	31.6	0.0	39.7	100.0	136
Other four-year colleges	18.6	18.6	7.0	55.8	100.0	86
Total	30.0	19.4	6.2	44.4	100.0	...
Total N	505	328	104	748	...	1,685

* Chi square for this table is significant beyond the .05 level of confidence.

liberal arts colleges (high on a quality-of-school index), other liberal arts colleges (low on a quality-of-school index), and other four-year colleges (mainly technical and religious training schools). These categories encompass most of the major distinctions among institutions of higher education.

The distribution of the sample among these eight categories of institutions is presented in table 1 along with the percentage experiencing different outcomes at each type of college by the time of the follow-up study in 1964.

[8] The distinction between good and other liberal arts colleges is based on a quality-of-colleges scale. A principal-components factor analysis was performed with the following items: percentage of the faculty holding a doctorate, average faculty salary, whether or not a Phi Beta Kappa chapter exists at the institution, the proportion of graduates who obtain a doctorate, the amount per student spent on books and periodicals for the library, and several indicators of selectivity of the student body. The loadings on the first factor extracted formed the basis for combining the items into a single scale.

The cutting point used in this analysis is that above the ranking of the state colleges. In this paper, good liberal arts colleges are institutions which rank higher than state colleges in quality but which are not necessarily recognized as outstanding or prestigious schools.

This paper will focus on the 1,253 male students who either dropped out of or graduated from the first college attended; the 328 who transferred and the 104 who were still attending college are omitted from the analysis. Table 1 is presented to indicate how the sample is affected by omitting these students.

Data are available for this sample regarding four student background characteristics which are related to persistence in higher education. Rank in high school class (X_1) (expressed as a percentile, available from the records of the high schools) is a measure of academic achievement reflecting potential ability, the motivation to achieve, and the extent to which academic skills have been acquired. Academic achievement in high school can be expected to predict performance in college.

A measure of intelligence (X_2) is also available for this sample. The manifest reason to restrict college enrollment is to select those with the greatest potential ability who can benefit most from further education involving greater intellectual demands. During the junior year in high school all students in Wisconsin are given the Henmon-Nelson Test of Mental Ability (1942). The percentile rank based on statewide norms is used in this study. In some tables the sample is dichotomized into high and low intelligence levels. The cutting point used is the sixty-seventh percentile rank based on the norm established for all high school juniors in the state. This point is used in preference to the median because higher education entails more demanding intellectual tasks than high school and is explicitly intended for those above average in academic ability. Moreover, use of the median would result in too few cases in the low intelligence category to permit adequate analysis because colleges overwhelmingly select students who are above average in high school.

The third student characteristic available for inclusion in this study is the level of occupational aspiration in the senior year of high school (X_3). Since higher education is the means to attaining high occupational positions, it is expected that persons who aspire to a high occupational level will have greater motivation to persist in college. Occupational plans were elicited by a structured question in the questionnaire administered in the high schools in 1957 (Sewell and Orenstein 1965). Level of occupational aspiration is operationalized as the Duncan socioeconomic score transformed to the metric of the NORC occupational prestige score (Duncan 1961). This scale has a theoretical range of 1–99.

The final student background characteristic available for this sample is socioeconomic status (X_4). Socioeconomic status subsumes a cluster of variables that may influence the individual's chances in the higher educational system, namely, the economic resources available to the student, the reference groups and social pressures from family and peers for obtaining a college degree, and the values which are conducive to high aspirations. The students have been assigned socioeconomic status scores based on a weighted combination of items involving the occupation of the father, the parents' educational level, and estimates of family economic resources. The theoretical range of the scale is from 1 to 99 (for details of the scale see Sewell and Shah 1967). In some tables socioeconomic status is dichotomized into

low and high levels, using as the cutting point the midpoint for the total sample of high school seniors. This point is used in an attempt to retain the meaning of high and low socioeconomic levels in reference to the total population as represented by the entire sample of high school seniors.

The dependent variable in this study is college graduation (X_5). Graduation is defined as having received a bachelor's degree from an institution of higher education by the close of the academic year 1964, the date of the follow-up study. Of the 1,253 college men who were neither transfer students nor still attending college in 1964, 731 or 60 percent had completed their bachelor's degrees. This study is an attempt to identify the relative importance of institutional differences in explaining who did and who did not graduate from college.

TABLE 2

CORRELATION MATRIX

(N = 1,253)*

Variable	X_1	X_2	X_3	X_4	X_5
X_1—rank in high school class	...	.515	.293	.030	.446
X_2—intelligence	...	...	.244	.135	.343
X_3—occupational aspiration	...	...	...	.185	.252
X_4—socioeconomic status	...	...	...	...	.179
X_5—graduation from college	...	...	...	...	...

* All correlations are significant beyond the .05 level except $r_{1.4}$.

THE ANALYSIS

The first question to be examined is whether colleges differentially recruit students who differ in characteristics which are related to the probability of graduating. The zero-order relationships of rank in high school class, intelligence, level of occupational aspiration, and socioeconomic background with graduation can be seen from the correlation matrix in table 2. Each of the four student characteristics has a positive and statistically significant correlation with graduation. Rank in high school class and intelligence are most highly related to graduation, while occupational aspiration and socioeconomic status are of significant but lesser importance. The correlation matrix also indicates that these student characteristics are significantly correlated with one another with the exception of rank in high school class and socioeconomic status.

In table 3 a multiple regression of graduation on the four variables is presented. The multiple R from this equation is .496, indicating that the student background characteristics together explain 24.6 percent of the variance in college graduation. The β weights from this regression equation indicate the amount of graduation associated with each of the student characteristics controlling for all of the others. Rank in high school class clearly makes the greatest independent contribution to predicting graduation, followed by socioeconomic status, intelligence, and finally occupational aspiration.

The above analysis of tables 2 and 3 shows that some kinds of student have a greater probability of graduating than others. The next step is t examine whether students with a relatively high probability of graduatin are more likely to attend certain types of colleges. Table 4 presents th means and standard deviations of student characteristics in the eight type of colleges. It is apparent that there are institutional differences in the type of students recruited. The high-prestige state university, the Catholi urban university, and the good liberal arts colleges select students with high rank in their high school class, high intelligence, and a high occupa tional aspiration. The urban state university, state colleges, and othe liberal arts colleges, in contrast, have students who rank relatively low i their high school class, in intelligence, and in occupational aspiration. Th findings in regard to socioeconomic status are not in the same rank order but students in the urban state university and in state colleges are also lo on this characteristic.

TABLE 3

MULTIPLE REGRESSION OF GRADUATION ON RANK IN HIGH SCHOOL CLASS, INTELLIGENCE, OCCUPATIONAL ASPIRATION, AND SOCIOECONOMIC STATUS

(N = 1,253)

Variable	Slope	β Weight
Intercept	−.603	...
Rank in high school class	.007	.353
Intelligence	.002	.120
Occupational aspiration	.005	.094
Socioeconomic status	.005	.135
Multiple R with graduation	.496*	
Percentage of variance explained	24.6	

* The F is significant beyond the .05 level of confidence.

TABLE 4

MEANS AND STANDARD DEVIATIONS OF STUDENT CHARACTERISTICS AT EACH TYPE OF COLLEGE

	Percentile Rank in High School Class		Percentile Rank in Intelligence		Occupational Aspiration Score		Family Socioeconomic Status Score		
Type of College	Mean	S.D.	Mean	S.D.	Mean	S.D.	Mean	S.D.	N
High-prestige state university	71	22	75	21	80	8	45	12	28
Urban state university	55	22	67	23	77	9	39	11	13
State colleges	56	24	58	26	74	10	38	11	39
Catholic urban university	71	23	77	20	81	8	42	11	10
Out-of-state universities	61	27	71	24	77	9	46	15	9
Good liberal arts colleges	73	21	73	21	78	6	50	13	9
Other liberal arts colleges	47	25	60	25	77	8	43	12	9
Other four-year colleges	68	25	69	26	78	7	40	12	6
Total	62	25	67	25	77	9	42	12	1,25

Since colleges differ in the kinds of students they recruit, they probably have different graduation rates. High graduation rates are likely at the high-prestige state university, Catholic urban university, and good liberal arts colleges, since students at these colleges more often have characteristics associated with a high probability of graduation. In contrast, the urban state university, state colleges, and other liberal arts colleges can be expected to have low graduation rates based on the characteristics of their students.

TABLE 5

MULTIPLE REGRESSION OF GRADUATION ON TYPE OF COLLEGE ATTENDED

Type of College	Unstandardized Regression Coefficient (Slope)	Probability of Graduating (Slope plus Constant)	N
High-prestige state university	.389	.722	281
Urban state university	...	.333	132
State colleges	.146	.479	394
Catholic urban university	.417	.750	104
Out-of-state universities	.254	.587	92
Good liberal arts colleges	.514	.847	93
Other liberal arts colleges	.247	.580	93
Other four-year colleges	.417	.750	64
Multiple R on graduation		.308*	
Percentage of variance explained		9.5	

NOTE.—Type of college is entered into the regression as a dummy variable. The category of urban state university has been omitted from the equation and serves as a reference point of zero for interpreting the slopes for the other categories of colleges.

* The F is significant beyond the .05 level of confidence.

A multiple regression is presented in table 5 to examine college differences in graduation rates. Graduation is regressed on the eight nominal categories of colleges, which have been entered as a dummy variable (for a discussion of dummy variables see Goldberger 1964, pp. 208–31; and for another example of their use in sociology see Sewell and Shah 1968*b*). The category of urban state university has been omitted from the equation. The slopes, or unstandardized regression coefficients, indicate the relative rate of graduation at each institutional type in comparison with this omitted school.[4] The highest graduation rate occurs at good liberal arts colleges,

[4] The general form of a regression equation is $y = a + b_1x_1 \ldots b_kx_k$, where y is the dependent variable, a is the constant and x_1 through x_k are independent variables. When a dichotomous dependent variable is used in a regression equation, as is the case here, the calculated value of y, given any values for the x's, may be interpreted as the conditional probability that the event will occur (Goldberger 1964, pp. 248–51).

In the regression presented in table 5, the equation only includes terms which are mutually exclusive (only one college can be attended) and the only values of the x's are 0 and 1. Therefore, the calculated value of y is equal to the unstandardized slope for each of the terms plus the constant term. The constant term of .333 in this equation is the conditional probability of graduation from the urban state university, which has been omitted from the equation. Thus the slopes in this equation indicate the conditional probability of graduating at each of the institutional types in comparison with the urban

followed by the Catholic urban university, other four-year colleges, and the high-prestige state university, all of which have quite similar rates. Much lower graduation rates occur at all other types of institutions, but the urban state university and the state colleges have particularly low rates. In general, these results conform with expectations based upon the characteristics of students at these institutions.

The results of this regression also indicate the gross relationship of the type of college attended to graduation. The multiple R from this equation is .308, showing that type of college attended explains 9.5 percent of the variance in graduation. The analysis in table 3 indicated that student

TABLE 6

STEPWISE REGRESSION ANALYSIS OF STUDENT INPUT CHARACTERISTICS AND TYPE OF COLLEGE ATTENDED ON GRADUATION FOR THE TOTAL SAMPLE AND EACH SOCIOECONOMIC STATUS AND INTELLIGENCE LEVEL*

Factors Explaining Variance in Graduation	Percentage of Variance Explained: Socioeconomic Status Low, Intelligence Low	Low SES, High Intelligence	High SES, Low Intelligence	High SES, High Intelligence	Total Sample
Student input characteristics....	19.7	21.2	18.3	16.5	24.6
Student input characteristics plus type of college attended......	25.9	24.6	22.1	22.2	27.7
Type of college attended beyond what can be explained by the student input characteristics..	6.2	3.4	3.8	5.7	3.1

NOTE.—Type of college attended is entered into the regression as a dummy variable, omitting the category of urban state university.

* The F for all entries is significant beyond the .05 level of confidence.

characteristics explain 24.6 percent of the variance in graduation. Thus, differences in student input characteristics may account completely for these institutional differences in graduation rates.

The second question examined in this paper is whether college differences in graduation rates exist, after student characteristics are controlled, due to effects stemming directly from the characteristics of the institutions. A stepwise regression analysis is presented in table 6 to show how much variance in graduation the type of college attended can explain beyond that accounted for by the characteristics of the students. This procedure is a stringent test, giving a conservative estimate of the institutional effect, since all of the variation in graduation explained jointly by student characteristics and type of college attended is attributed to the student characteristics. Separate regressions were computed for the total sample and for

state university. When the constant, .333, is added to the slopes of the other terms, the actual percentage graduating from each of the institutions is obtained.

each socioeconomic status and intelligence level to find out whether the type of college attended has a significant effect for different types of students.

For the total sample, 24.6 percent of the variance in graduation is accounted for by the student input characteristics. When type of college is added into the equation as a dummy variable, the total amount of variance explained is 27.7 percent. Thus, type of college attended accounts for 3.1 percent of the variance in graduation beyond what can be explained by the rank in high school class, measured intelligence, level of occupational aspiration, and socioeconomic background of the students. Furthermore, this institutional effect is significant for all levels of socioeconomic status and intelligence. Apparently the type of college attended does influence the probability of graduating.

The third purpose of this paper is to specify the types of colleges where graduation is most likely. Table 7 presents the unstandardized regression coefficients where graduation is regressed on the student input characteristics and type of college attended. The type of college is entered into the regression as a dummy variable. The category of urban state university has been omitted from the equation but is included in the table with the value of zero to indicate that it serves as a reference point for interpreting the slopes for the other categories. These coefficients represent the amount of graduation in each type of college relative to the graduation rate at the urban state university and after the effects of the student input characteristics have been removed. (For a discussion of the advantages of using unstandardized coefficients see Blalock 1967.)

For the total sample, the highest graduation rates occur at the liberal arts colleges and other four-year colleges, followed by the Catholic urban university and high-prestige state university. The lowest rates occur at the urban state university, the out-of-state universities, and the Wisconsin state colleges. These findings display some interesting differences from those presented in table 4, where graduation was regressed on type of college attended without controlling for student characteristics. The most important differences are that, after controlling for student input characteristics, good liberal arts colleges do not have a much higher graduation rate than other four-year colleges, and that other liberal arts colleges have among the highest rather than the lowest graduation rates. Also, out-of-state universities have graduation rates as low as state colleges after controlling for student characteristics.

Separate regressions have been computed for each socioeconomic status and intelligence level (as in table 6), but caution must be used in interpreting these findings. Because each equation involves a different range of the variables, the regression coefficients can be compared only within the same group or column, not between groups or across the rows. Also, the weights for some categories of institutions for the low-status students are based on small numbers and therefore may be unreliable.

Some notable differences between students of different socioeconomic status and intelligence level occur in the type of institution from which

graduation is most likely. (1) Low-status students in the low-intelligence category have the most favorable graduation rates in other liberal arts colleges and other four-year colleges. They also do comparatively well in the high-prestige state university, the Catholic urban university, and the state colleges. (2) Low-status students with high intelligence have relatively high graduation rates in the high-prestige state university, followed by the Catholic urban university and other liberal arts colleges, but relatively low success in all other types of institutions. (3) High-status students in the lower intelligence category have high graduation rates in the liberal arts colleges and the Catholic urban university but do poorly in the state colleges, high-prestige state university, and out-of-state universities. (4) The high-status students with high intelligence have relatively high graduation

TABLE 7

UNSTANDARDIZED COEFFICIENTS FOR THE REGRESSION OF GRADUATION ON STUDENT CHARACTERISTICS AND TYPE OF COLEGE FOR THE TOTAL SAMPLE AND EACH SOCIOECONOMIC STATUS AND INTELLIGENCE LEVEL

	Socioeconomic Status				
	Low		High		
	Intelligence		Intelligence		
Variables	Low	High	Low	High	Total Sample
Student input characteristics:[a]					
High school rank	...	...	...	...	...
Intelligence	...	...	...	...	...
Occupational aspiration	...	...	...	...	...
Socioeconomic status	...	...	...	...	...
Type of college attended:[b]					
High-prestige state university	.285	.261	.134	.294	.232
	(22)	(39)	(69)	(151)	(281)
Urban state university	.000	.000	.000	.000	.000
	(19)	(20)	(39)	(54)	(132)
State colleges	.212	.123	.102	.245	.182
	(90)	(64)	(145)	(95)	(394)
Catholic urban university	.243	.166	.307	.321	.260
	(9)	(21)	(17)	(57)	(104)
Out-of-state universities	−.083	−.001	.144	.372	.178
	(16)	(10)	(21)	(45)	(92)
Good liberal arts colleges	.117	.082	.355	.373	.326
	(7)	(1)	(27)	(58)	(93)
Other liberal arts colleges	.382	.137	.286	.273	.306
	(11)	(12)	(47)	(23)	(93)
Other four-year colleges	.337	.097	.200	.430	.323
	(11)	(10)	(14)	(29)	(64)
Total *N*	(185)	(177)	(379)	(512)	(1,253)

NOTE.—Numbers in parentheses indicate number of students attending.

[a] Since the unstandardized regression coefficients are presented rather than β weights, comparisons cannot be made between student input characteristics. Therefore, these coefficients have been omitted from this table even though these variables are terms in the equations.

[b] Type of college is entered into the regression as a dummy variable. The category of urban state university has been omitted from the equation. It is included in the table with the value of zero to indicate that it serves as a reference point for interpreting the slopes for the other categories.

rates in all types of schools but make the best showing in the other four-year colleges, the good liberal arts colleges, and out-of-state universities. They also experience high graduation rates in the Catholic urban university and the high-prestige state university. For this group the poorest graduation experience is for those who attend the urban state university.

Since the probability of graduating differs between institutions, those types of students who are channelled disproportionately into institutions where there is a high probability of graduating will be most successful in obtaining a college education. Selectivity into institutions may affect the probability of completing college beyond the effects of the college context.

TABLE 8

PERCENTAGE OF EACH SOCIOECONOMIC STATUS AND INTELLIGENCE LEVEL ATTENDING EACH TYPE OF COLLEGE*

	Socioeconomic Status				
	Low		High		
	Intelligence		Intelligence		
Type of College	Low	High	Low	High	Total Sample
High-prestige state university	11.9	22 0	18 2	29.5	22.4
Urban state university	10.3	11.3	10.3	10.5	10.5
State colleges	48.7	36.2	38.3	18.6	31.5
Catholic urban university	4.9	11.9	4.5	11.1	8.3
Out-of-state universities	8.6	5.6	5.5	8.8	7.4
Good liberal arts colleges	3.8	0.6	7.1	11.3	7.4
Other liberal arts colleges	5.9	6.8	12.4	4.5	7.4
Other four-year colleges	5.9	5.6	3.7	5.7	5.1
Total	100.0	100.0	100.0	100 0	100.0
N	185	177	379	512	1,253

* Chi square is significant beyond the .05 level of confidence for this table.

The final purpose of this paper is to examine whether the distribution of students of different socioeconomic status and intelligence among the types of colleges is in accordance with their chances of graduating from them. Table 8 distributes students of each socioeconomic status and intelligence level among the different types of colleges. An examination of tables 7 and 8 together indicates that in some instances selection into institutions is in accordance with the chances of graduation. Thus state colleges disproportionately recruit students of low status and low intelligence, but these students are relatively successful in these institutions compared with other types of students. Among high-status students, those of low intelligence are much less likely to attend the high-prestige state university than those of high intelligence; they also experience a relatively low graduation rate.

Nevertheless, a few patterns of attendance indicate that selectivity apparently gives high-status students an advantage over their low-status peers in completing college. For example, the greatest proportion of low-

status students of high intelligence attend state colleges. Table 7 shows that these students experience a greater probability of graduating if they attend the high-prestige state university. Also of importance is the evidence that high-status students of low intelligence appear to increase their probability of graduating by attending liberal arts colleges where they are relatively successful. Low-status students are not particularly successful in these institutions, nor do many attend them. The most likely explanation is the financial difficulty they would experience in attending private schools.

SUMMARY AND CONCLUSION

In summary, this paper has examined the relationship of type of college attended to graduation. First, it was shown that some student characteristics—high rank in high school class, high intelligence, high occupational aspiration, and high socioeconomic status background—are associated with a greater probability of graduating from college, and that the differences in graduation rates between institutions generally correspond to differences in the type of students recruited. Second, through a stepwise regression analysis it was found that the type of college attended has an independent effect on chances of completing a degree. Student input factors are the most important influence on graduation, but type of college attended was found to explain a significant proportion of variance (3.1 percent) beyond what could be accounted for by student characteristics. Third, it was found that students of different socioeconomic status and intelligence levels have different success in each of the different types of colleges. Finally, selection into institutions was viewed as affecting the probability of completing college beyond the influence of the college entered. The distribution of students among the different institutions is sometimes in accordance with their probability of success. The evidence indicates that the selection process accentuates the advantage of high-status students in completing a college education.

The explanation for the differences in graduation rates between types of colleges is beyond the scope of these data. Perhaps some schools have lower standards of success, and therefore graduation is more likely from them. Or differences in graduation rates may be due to the greater attention given to marginal students at some schools. Finally, characteristics such as the quality of faculty or the relationships among students may affect the individual's performance or satisfaction with college life and thus influence his chances of graduating. Further research will be needed to delineate this process through which the life chances of students in the educational system are affected by the diversity of institutions in American higher education.

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Lament for the Letterman: Effects of Peer Status and Extracurricular Activities on Goals and Achievement[1]

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This paper tests the hypothesis that the student's peer status and h extracurricular participation in high school will effect both his educa tional goals and his subsequent college attainments, holding famil SES, I.Q., and grades constant. Perceived status is positively relate to goals but negatively related to their fulfillment. Athletes who ex aggerate their peer status but do not participate in service or leade ship activities especially fail to fulfill their aspirations. The extra curriculum can be a major source of success orientations independer of family status and academic performance, but only certain activitie foster the skills and attitudes necessary for later success in college.

THE PROBLEM

Since most Americans regard formal education as a key to occupational an financial opportunities, access to college is viewed as both a desirable an an essential step in striving for upward social mobility.[2] In keeping wit the belief that higher education is generally accessible to those with suff cient ambition, many sociologists have examined the factors associate with either high or low college aspirations.[3] A number of studies (Kah 1953*a;* Sewell et al. 1957; Bordua 1960; Ellis and Lane 1963; Kraus 1964 Bennett and Gist 1964; Rehberg and Westby 1967; Sewell and Shah 1968*a* have focused on various measures of family socioeconomic status, parenta encouragement, and the sex and intelligence of the child. In general, the suggest that parental occupation, education, values, encouragement, an

[1] The author is indebted to the superintendent of schools, the principal, guidance staf and teachers in the two schools used in this study for their cooperation and assistanc both in 1963 and in 1967. Professors Thomas J. Cottle, James A. Davis, Christopher S Jencks, Stephen London, and Marshall W. Meyer were most helpful in providing criticisr of earlier drafts of this paper.

[2] Hyman (1966) argues, in fact, that attitudes toward higher education are an essentia aspect of the value differences among social classes. Similar points are raised by Turne (1964*a*) and Kahl (1953*b*). Eckland (1965) shows that occupational destinations ar strongly affected by college attendance, even with family status and intelligence hel constant; and Davis (1963) demonstrates that the relationship between amount of edu cation and occupational status is rising slowly over time. In an earlier paper, howeve Anderson (1961) questioned the role of formal education in facilitating occupationa mobility.

[3] The issues surrounding the concept of "equality of opportunity" are analyzed from a variety of perspectives by Trow (1966), Spady (1967), Coleman (1968), Dyer (1968) Katz (1968), Pettigrew (1968), Wilson (1968), Bowles (1968), and Cohen (1968).

family size all influence educational aspirations, regardless of the child's sex or intelligence.

Research more pertinent to our topic concerns the analysis of social environments as a source of influence on student aspirations. Wilson (1959), Michael (1961), Sewell (1964), Turner (1964*b*), and Sewell and Armer (1966) provide evidence that the nature of the social context of the student's community influences his aspirations, even with family SES and student I.Q. and grades held constant. The former three analyze the impact of community status from the perspective of the social class composition of the high school itself. Each finds that those in schools with more middle-class students have higher aspirations than comparable students in schools with a smaller middle-class population, independent of their own family status.[4] In applying this principle of contextual effects to direct interpersonal relations, Campbell and Alexander (1965) show that the higher aspiration levels of students in predominantly middle-class schools can be explained by their having direct friendship with middle-class students in their schools rather than by class composition per se. Similarly, Simpson (1962) suggests that anticipatory socialization by middle-class peers helps to account for high status aspirations among working-class boys. With family SES, social ambition for son, and his I.Q. held constant, Haller and Butterworth (1960) also find that son's peer relationships have some bearing on the level of his educational aspirations.

The importance of high school peer groups in shaping the educational plans of students is further documented by McDill and Coleman (1965). They show that over a four-year period, students with high peer status raise their aspirations while the aspirations of nonleaders drop, regardless of father's education. These changes, they argue, reflect a definite shift away from family SES as the primary determinant of college plans. By his senior year, the student's status in his peer group accounts for larger differences in aspiration levels than does family status, especially among boys. Their findings suggest that the desire for future success may rest almost as much on the student's personal achievements and status among his peers as on parental desires and role models.

Since Coleman (1961, 1965) finds peer status closely linked to participation in athletics, it seems possible that athletics provide a more important source of support for future success than Coleman acknowledges. According to findings by Rehberg and Schafer (1968), in fact, athletic participation is strongly associated with educational expectations, particularly among students with low parental encouragement and low academic performance.[5]

In the abstract at least, these findings suggest that the student's role in the high school and the recognition he receives for accomplishments of all kinds are important sources of success goals, even when resources such as intelligence and parental education and encouragement are taken into

[4] In an extension of these concepts, McDill et al. (1967, 1968) have measured the influence of "value climate" variables on the performance of high school students, independently of both high school socioeconomic composition and student background.

[5] Similar findings are presented by Schafer and Armer (1968).

account. Further inquiry into this subject would seem justified, howeve only on the assumption that the extracurriculum of the school is a vehicl for interpersonal competition and status acquisition as well as a diversio from the more serious nature of the academic work.[6] To the extent tha students must compete for recognition and honors both inside and outsid the classroom, the extracurricular activities and the informal status systen of the school foster achievement and success orientations as well as op portunities for socializing and fun. In these respects they represent a adolescent analogue to the system of voluntary associations in the large community and provide important socialization experiences for student with mobility aspirations; that is, they vary considerably in both purpos and prestige and enable members to develop and use their organizationa and leadership skills.[7]

Although Waller (1961), Coleman (1961), and Gordon (1957) have al analyzed the nonacademic and often superficial aspects of extracurricula activities in the American high school, they have not emphasized thes strengths. Certainly much of its content is nonacademic, and that neces sarily forces many students to divide their time between study and othe forms of activity. Nonetheless, a number of activities enable students no only to acquire hobbies, explore new interests, and make new friends, bu also to test and develop a broad range of physical, interpersonal, leadership and intellectual skills. Certainly the most conspicuous of these activities i athletics; but several others—including musical and dramatic groups publications, and service functions—usually demand considerable amount of time, energy, and ability.

Personal prestige can be earned in activities that are both conspicuou and bring credit to the school.[8] This prestige should be strongly associate with success orientations because it already symbolizes the student' ability to achieve recognition on the basis of his *own* abilities and charac teristics. Whether these status perceptions as well as the abilities an orientations acquired in various extracurricular activities also facilitate th ultimate realization of these aspirations will be a primary concern of thi paper.

The addition of college attainments as an aspect of our inquiry not onl extends the scope of the analysis but leaves us without precedents amon existing studies. For despite the profusion of studies on aspirations an attainments as separate phenomena, the literature contains few longitudina studies which follow students from high school either to or through college. Even among these studies (Flanagan et al. 1964; Astin 1964; Baird an Holland 1968; Trent and Medsker 1968; Sewell and Shah 1967 and 1968*b*

[6] The role of certain segments of the youth culture and the extracurriculum of the schoo in deflecting serious achievement orientations is discussed by Parsons (1959).

[7] The importance of voluntary associations and patterns of community social interactio as components of social status is discussed at length by Kahl (1953*b*, pp. 127–56).

[8] This point is emphasized by both Coleman and Gordon.

[9] For a summary of the literature regarding the prediction of academic success in college see Lavin (1965).

Schoenfeldt 1968) there are few examples which analyze either college entrance or attainment in terms of the educational goals of students during high school.[10] Without such data it is impossible to assess the full relevance of the aspirations literature, since college attainment is assumed rather than measured. The most conspicuous limitation of most of these studies is, of course, that not all of the students with high aspirations will even go to college, let alone finish. This raises the possibility that variables which account for differences in aspirations during high school may not account for similar differences in actual attainments, largely because of selective attrition from high school to college and from college entrance to graduation.

In order to avoid these theoretical and methodological limitations, we propose to examine three separate issues: (1) the influence of peer-group factors on student aspirations (i.e., how many students want to attend college); (2) the influence of these factors on college attainments (i.e., how many students actually get beyond the first year of college); and (3) the influence of these factors on goal fulfillment (i.e., how many students with college aspirations during high school actually get beyond the first year of college). We shall examine each of these relationships with family SES, student I.Q., and high school grade performance taken into account.

SAMPLE AND METHODS

The data used were gathered by means of primarily precoded questionnaires from the 297 senior boys in two neighboring West Coast high schools in early September 1963 and again four years after graduation. The schools are located in a rapidly developing suburban area adjacent to a city of nearly 500,000, and each has an enrollment of nearly 1,300 students. Until recently this particular part of the larger city's suburbs contained a small town, rather sparsely settled residential and commercial areas, and a number of small farms. This mixture of small town, semirural, and suburban modes of life, and the size of the student bodies combine to make these two schools rather typical of the nonurban public high schools in the United States.

However, this residential diversity and the wide range of paternal occupations and family incomes in the school district make the sample difficult to stereotype in social class terms. In addition, the absence of noticeable ethnic, religious, or social class "exclusiveness" in the community con-

[10] The limitations of these studies include the failure to include student aspirations among the high school data and the failure to analyze attainments as a function of aspirations, if available. Sewell and Shah (1968*b*), for example, employ a four-stage dependent variable (parental encouragement, student plans, college entrance, and college graduation), but they analyze the impact of their independent variables on each of these dependent variables separately. An equally valid (and perhaps even more fruitful) strategy would be to analyze the effect of each independent variable on the transition from one stage to another. This latter strategy will be employed extensively in this paper. In their earlier paper (1967), however, they do use aspirations to account for college attainments, but their primary focus is on the relative influence of family SES and student I.Q. on college completion.

tributes to an open and egalitarian social climate in the schools.[11] Togeth these factors support a system of rewards and prestige in the schools bas largely on achievement rather than ascriptive criteria.[12]

Each boy completed a self-administered questionnaire during class tir early in his senior year. The questionnaire was designed to provide inform tion about the student's academic and extracurricular experiences; his c teria for evaluating the bases of peer popularity, respect, and status; l occupational and educational goals; his tastes in music, reading, and rec ation; and his family's socioeconomic status and life-style. All but t seniors completed the 1963 questionnaire. In addition, Primary Men Abilities scores and academic records were available for all students exce for a few recent transfers.

Parents were also requested to complete a questionnaire which explor in some detail their educational and work experiences; their extracurricul educational, and occupational aspirations for their son; and their assessme of his social, extracurricular, and academic skills. Nearly 77 percent w completed and returned.

In December 1967, a brief questionnaire exploring educational and wo experiences since high school was mailed to each student in the origi sample. A list of all nonrespondents was then sent to a random sample early respondents along with a request for address changes or for inform tion about the post-high school experiences of their former colleagues, known. Over all, 73 percent of the original sample returned questionnair Data for an additional 12 percent were reconstructed from reports by p ents and other students, and the remainder were checked against sch records. According to school guidance officials, none of these remaini nonrespondents had ever sent their high school transcript to a college, r had any of them matriculated.

THE DEPENDENT VARIABLES

In view of the current scarcity of knowledge concerning the factors th affect the relationships between educational aspirations during high schc and actual achievements in college, we shall examine three separate d pendent variables: the educational goals of students while seniors in hi school, the educational attainments of those students four years later, a the extent to which their original goals had been realized.

Educational goals were measured by an item in the 1963 questionnai which asked students to check the level of schooling (graduate study, college degree, some college—among others) that corresponded to th

[11] The extent to which community attitudes are free of strong social class bias is su gested by the fact that 60 percent of all white-collar families, when asked to select fr which social class background they preferred their son's friends to come, chose "Soc Class Is Unimportant" over "Middle Class" and other specific alternatives.

[12] This assertion is supported by the fact that father's occupation is correlated only .1 with son's grade performance and .097 with son's actual peer prestige. This is not to sa however, that the ultimate distribution of either academic or extracurricular rewards equal for students from all family backgrounds.

personal educational goals. The results are treated first as an ordinal variable with six categories, ranging from graduate study to some high school (as in table 1); and second, as a dichotomy with "high" signifying some college or more.

Educational attainments were assessed by compiling information from several items in the 1967 questionnaire, reports from student informants, and high school guidance records. Since virtually all colleges demand a high school transcript as part of the application procedure, students for whom no transcript had ever been sent were classified as having had no college. The questionnaire items referring to the number of semesters of full-time college credit were then reduced to six ordinal categories, ranging

TABLE 1

ZERO-ORDER CORRELATIONS BETWEEN MAJOR INDEPENDENT VARIABLES AND STUDENT EDUCATIONAL GOALS, AND POST-HIGH SCHOOL ATTAINMENTS

	DEPENDENT VARIABLES	
INDEPENDENT VARIABLE	Goals (1)	Attainments (2)
Father's occupation[a]	.208	.242
Father's civic affiliations[b]	.332	.271
Father's education[c]	270	.253
Mother's education	.179	.246
Son's intelligence[d]	.439	402
Son's grades[e]	552	.531
Son's perceived peer status[f]	.296	.101*
Son's actual peer status[g]	.194	.249
Son's activities index[h]	.344	.339

[a] Father's occupation was coded from open-ended responses into six ordered categories ranging from professional and scientific to unemployed. All cases of fathers being retired, deceased, or unknown were treated as blank.

[b] Father's civic affiliations was coded from open-end-responses into six ordered categories ranging from national professional organizations to no activities or memberships at all.

[c] Parents' education was precoded into eight ordered categories ranging from postgraduate college work to less than eight years

[d] Son's intelligence was measured by Primary Mental Abilities tests given to all students in both schools during the junior year.

[e] Son's grades were compiled from school records prior to the senior year. Nonacademic courses such as physical education and typing were excluded from the computations.

[f] Perceived peer status was precoded into five ordered categories ranging from at the top to probably don't rank high at all.

[g] Actual peer status was coded from nominations made by other students in the school The number of votes each student received as being one of the most influential seniors was used to assign him to a level along with others receiving a similar number of votes. In both schools five rather distinct levels emerged, ranging from over fifty nominations for some students to none for most. The rank of the level rather than the number of votes formed the basis of these computations.

[h] The activities index was constructed by classifying the student's three major extracurricular activities into three groups. Varsity sports, student offices, and service organizations were coded 0, other activities were coded 1, and no participation was coded 2. These converted scores were then summed over the three choices. Possible scores ranged from 0 for students who participated in all three major activities to 6 for students who were not active in anything.

* This is the only Pearson r coefficient in the table that is not significantly different from zero at the .01 level of confidence.

from working on a fourth undergraduate year to no education or formal training beyond high school. These data were also used both as an ordinal variable (as in table 1) and as a dichotomy. (Because a few respondents entered college after working or serving in the armed forces for two years, we have adjusted the "high" category to include all those with more than one year of college credit.)

Goal fulfillment in this context refers to the conditional probability that a student earned more than one full year of college credit, *given* that he aspired to attend college while in high school.[13] This must be distinguished from levels of college attainment per se, since many of those not in college had no prior intention of attending.

THE FINDINGS

During the senior year of high school, 16.5 percent of these 297 boys hoped to do postgraduate college work; an additional 49.2 percent wanted a bachelors degree, and another 8.4 percent hoped for at least some college experience—a total of 74.1 percent. Yet by 1967 no more than 48.5 percent had completed more than one year of college, and only 60.6 percent had ever entered college. Not only did 18.6 percent of those with college goals fail to reach their second year, an additional 18.6 percent apparently lacked either the motivation or resources necessary even to matriculate at non-selective local community colleges.[14]

These observations demand that we examine some of the apparent sources of these original aspirations for clues to the nature and substance of the motivations and resources necessary for subsequent survival in college. In view of our earlier contention that a whole range of school experiences may affect a student's sense of mastery and self-esteem (independent of family status and success orientations) we shall examine the effects of three different sets of independent variables on our dependent variables: the socioeconomic and status characteristics of the family, the student's academic potential (as reflected in intelligence and grades), and the student's own status characteristics within the high school. We shall assume that the higher the correlation between two variables, the more the independent variable serves as a central resource for student motivation. The results of this analysis are presented in table 1.

The data in column (1) indicate that the individual components of all three measures are positively associated with student educational goals at the .01 level of confidence. The coefficients for academic potential in particular are higher than those for family socioeconomic status. Among the latter, in fact, the strongest variable is neither paternal education (.270)

[13] Since nearly four years had elapsed since these students left high school, a more stringent criterion of college attainments could have been used, for example, three years or more. Since this would have categorically biased our results against students who took a job or entered the service before going to college, however, we decided that more than one year was a satisfactory compromise.

[14] These figures do not reflect the ten students who had gained some college experience by 1967 despite their lack of college aspirations as high school seniors.

ıor occupation (.208) but the nature of father's civic participation and nembership in voluntary associations (.332).[15] Apparently the type of role ather chooses to play in community affairs and the energy and motivation ıe invests in local organizations more effectively symbolize family socio-conomic status and influence son's aspirations than does father's occupa-ıon or education. Nonetheless, son's own extracurricular role playing in ıgh school (summarized in the Activities Index), appears to play at least ın equally important part in differentiating high aspirants from others .344). Since this index was constructed to reflect both amount and kind of articipation in the school, we have a student-based parallel to father's ivic affiliations and a major source of the student's own status vis-à-vis his eers. Although these data do support McDill and Coleman's finding that ctual peer status is a major correlate of educational aspirations, aspiration evels seem to be linked more closely to the student's perception of his tatus (.296) than to the status actually given to him by his peers (.194).[16]

According to the data in column (2), these same factors help to predict he likelihood of actually going very far in college. Again, intelligence (.402) nd grades (.531) have the greatest bearing on college attendance, but oth high school extracurricular participation (.339) and actual peer restige (.249) are as important as any SES measure except father's civic ffiliations (.271). The student's extracurricular involvements and his tatus within the social system of the high school emerge as important, lbeit unexplored, influences on college attainments.[17]

This is less true of perceived status, however. While boys who claim to ave high prestige among their peers have higher aspirations, they are bare-y overrepresented among those with the highest college attainments (.101). or virtually all of the other variables, the nearly comparable correlations n both columns suggest that each variable affects attainments about as uch as goals. Since these relationships are expressed as linear coefficients, owever, it is not clear what the actual levels of aspiration and attainment re for either self-professed "leaders" or their fellow students. Nor is it clear o what extent intelligence, grades, and peer-group status may be proxies ither for family SES or for each other. In order to clarify these relation-hips, we examine the percentage of high aspirants and high achievers with-n different levels of perceived peer prestige, while using major SES and cademic potential variables as controls. The results are presented in ta-le 2.

These expectations are predicated on the fact that father's occupation is usually re-arded as the single best measure of socioeconomic status. However, since occupational hoice is not always voluntary, one's civic affiliations and other associations off the job ften represent more accurately the nature of the status he desires in the community. hese findings suggest that father's function as a role model in defining his community tatus may be a more potent influence on son's desires for further status than is his job.

McDill and Coleman's (1965) measure of peer status resembles *actual* peer status in ur study, but they did not treat the student's perceptions of his status in their analysis.

This conclusion may seem premature, since it is based on zero-order correlations only. Vhen a series of control variables are used later in the analysis, however, the same point olds.

TABLE 2

Percentage with High Educational Goals and Attainments by Perceived Status and Selected Control Variables

Control Variable	Perceived Peer Status: At or Near Top	Middle	Lower	Difference
A. With College Goals				
Father white collar[a]	97.4 (39)[b]	80.0 (60)	70.3 (37)	27 1*
			*	
Father blue collar	90.3 (31)	70.0 (70)	45 5 (44)	44.8*
Father high civic[c]	100 0 (37)	83 7 (43)	78.3 (23)	21 7*
	*		*	
Father low civic	86 8 (38)	70 3 (91)	49.2 (65)	37 6*
Son high I.Q.[d]	96.6 (29)	84 8 (46)	84 6 (26)	12 0
			*	
Son low I.Q.	90 9 (44)	70.0 (80)	44.6 (56)	46.3*
Son high grades[e]	100.0 (26)	97.3 (37)	94 7 (19)	5 3
		*	*	
Son low grades	89.8 (49)	66.0 (97)	47.7 (65)	42 1*
B. With More than One Year of College				
Father white collar	56.4	58.3	59.5	− 3.1
			*	
Father blue collar	51.6	45 7	27.3	24 3
Father high civic	59.5	62 8	60.9	− 1 4
			*	
Father low civic	44.7	46.2	33.8	10 9
Son high I.Q.	58.6	71.7	73 1	−14.5
		*	*	
Son low I.Q.	47.7	43.8	30 4	17 3
Son high grades	73.1	78 4	73.7	− 0 6
	*	*	*	
Son low grades	40.8	41 2	33 8	7 0

[a] Fathers with professional, executive, managerial, high-level technical and clerical occupations.
[b] Base N for the percentage.
[c] Fathers in highly regarded business, civic, and church associations.
[d] Students with Primary Mental Abilities test scores of 106 or above.
[e] Students with a "B" average or better in academic subjects.
* An asterisk following a percentage difference indicates that the difference is significant at the .05 level or better. An asterisk located between two percentages in the body of the table indicates that the difference between them is significant at the .05 level or better.

The figures in section A of table 2 show the percentage of seniors aspiring to attend college, given the level of their peer status and either father's occupation, father's civic affiliations, son's measured intelligence, or son's academic grades. The latter controls are separate rather than simultaneous since the necessary case bases for presenting percentage data would have been severely depleted if all four controls had been used simultaneously.[18] For example, 97.4 percent of the thirty-nine seniors with high perceptions and white-collar fathers want at least some college, compared to only 70.3 percent of the thirty-seven students with low estimates of their peer prestige and white-collar fathers. The percentage difference (top minus lower) is presented at the right. Asterisks either adjacent to these differences or between pairs of percentages indicate that the percentage difference between the two groups in question is significantly different from zero at the .05 level of confidence at least.[19]

A close examination of the data in section A shows that both the horizontal and vertical patterns are quite consistent; for example, regardless of SES or academic potential, students with high estimates of their peer status are more likely to want a college experience than those in successively lower categories. Second, the differences between highs and lows on perceived status are always much larger (averaging 43 percent) and statistically significant within the low categories of the control variables. Third, when perceived peer status is held constant, students high on the respective control variables are more likely to have the highest college goals. Seven of these twelve differences are significant at the .05 level.

Together, these patterns suggest that a student's perceived status in his high school social system has a definite bearing on his educational goals, particularly for boys who are comparatively lacking in the socioeconomic and academic resources traditionally associated with college aspirations. Even though high aspirations are always more prevalent among students with high SES, intelligence, or grades, the magnitude of the differences due to these variables is consistently much larger among those with low perceived status.[20] In other words, having a father with a white-collar job or an important role in community affairs, or being bright, or earning high grades appears to give students such ample incentives for further success that their own perceived failure to achieve recognition among their peers has

[18] Although using all four controls simultaneously would have been a sounder strategy, this technique does enable us to test whether the zero-order effects of peer status are an artifact of any one of the major SES and academic potential variables in table 1. A regression analysis not reported here was performed using all nine independent variables in table 1. The partial correlation for perceived status was .191, and the entire set of variables accounted for 41.3 percent of the variance in student aspirations.

[19] For example, an asterisk next to the percentage differences in the right-hand column indicates that it is significant, given the size of the *N*s on which the original two percentages are based. An asterisk in the body of the table signifies that the difference between the two adjacent percentages (either horizontal or vertical) is also significant although the differences are not presented (see Vernon Davies [1962]).

[20] Hypothetically, at least, if we could substitute participation in athletics for perceived status, these findings would be very similar to those presented by Rehberg and Schafer (1968).

only a minor bearing on their aspirations. But the absence of these primary motivational resources makes the student's perceived role particularly critical. For example, among students who lack these resources, those who lack a sense of prestige are only about half as likely to have high aspirations as their fellow students with a high estimate of their own prestige (about 47 and 89 percent, respectively).[21] In the case of the two SES control variables, students from low-status families with high estimates of their own status have higher aspirations than their peers with high family backgrounds but lower perceived status (roughly 88 and 74 percent, respectively). This contrast further supports the notion that motivation for future success may be based on a desire for status maintenance that eminates as strongly from the student's own sense of social standing among his peers as from the relative prestige of his family in the larger community.

Assuming that this interpretation is valid, we must then ask whether these same bases of student aspirations also account for parallel differences in educational attainments beyond high school. The figures in section B of table 2 suggest that they do not. There we find that the percentage of students receiving more than one year of college hardly varies at all among the "highs" on the control variables—except for a small, nonsignificant reversal among those with high I.Q.'s. Within the low control groups, the differences associated with perceived peer status are both nonsignificant and much smaller than the 43 percent differences associated with aspirations. The largest and most consistent differences in section B are due to the control variables, especially high school grades.

These patterns clearly suggest that family SES and student academic potential, rather than perceived status, account for the major differences in actual college attainments. They also suggest, however, that perceived prestige is likely to affect educational achievement to a minor extent among those with low family and academic resources. Nonetheless, the relationship between high school status and the attainment of college aspirations remains ambiguous. This relationship can be clarified only by considering the college attainments of students who initially wanted to attend college as distinct from all students in the sample (table 3).

We find that under most conditions a student's chances of getting beyond the first year of college, given that he originally wanted to attend, are affected by his perceived status as well as by the control variables. The nature of the relationship, however, is the *reverse* of that noted in section A of table 2; that is, students with high status perceptions are generally *more* likely to have high aspirations but *less* likely to fulfill them. This finding holds among all but two levels of family SES and student academic potential and is strongest at the high levels of the control variables. For example, only 57.9 percent of the thirty-eight students with white-collar fathers, high perceived status, and high educational goals actually got beyond the

[21] These figures are approximations derived by averaging the percentages in the appropriate categories on all four control variables, that is, in the case of the low-status boys who are low on the control variables these are: 45.5, 49.2, 44.6, and 47.7 percent from top to bottom, respectively.

first year of college. This compares unfavorably with the 76.9 percent "successes" among their 26 counterparts with low perceived status.

When status perceptions are held constant, however, the major control variables appear to account for several large differences in goal fulfillment, six of which are either statistically significant or exceed 20 percent. Five of these six large differences are due to the high rates of attrition among boys with low academic credentials. Of these five, the highest failure rate occurs among the 44 boys with low grades but high perceived status.

TABLE 3

PERCENTAGE WITH INITIAL COLLEGE GOALS ACTUALLY RECEIVING MORE THAN ONE YEAR OF COLLEGE, BY PERCEIVED PEER STATUS AND SELECTED CONTROL VARIABLES

Control Variable	At or Near Top	Middle	Lower	Difference
Father white collar......	57.9 (38)	68.8 (48)	76.9 * (26)	−19.0
Father blue collar.......	57.1 (28)	59.2 (49)	45.0 (20)	12.1
Father high civic.......	59.5 (37)	72.2 (36)	72.2 (18)	−12.7
Father low civic.......	51.5 (33)	59.4 (64)	56.3 (32)	− 4.8
Son high I.Q...........	60.7 (28)	76.9 * (39)	81.8 * (22)	−21.1
Son low I.Q............	52.5 (40)	57.1 (56)	52.0 (25)	0.5
Son high grades........	73.1 * (26)	77.8 * (36)	77.8 (18)	− 4.7
Son low grades.........	45.5 (44)	56.3 (64)	54.8 (31)	− 9.3

* An asterisk located between two percentages in the body of the table indicates that the difference between them is significant at the .05 level or better.

Coupled with the fact that all "high" perceived status groups in the control levels have comparatively low fulfillment rates, the long-run implications of high perceived status may not be altogether positive. Having a high sense of personal importance, regardless of one's family or academic resources, may initially lead a student to inflate his aspirations in keeping with his self-esteem. But the bases on which perceived status rests may be transitory, and the nature of any resulting aspirations may be subject to changing personal circumstances. When high school ends and many sources of prestige disappear, students are often forced to find alternative sources of social support. To the extent that these sources are not readily available outside the family and the largely disbanded peer group, the student's ability to sustain his motivation may well depend on the abilities and the kind of values he has acquired up to that point in his life. Should these values and abilities be insufficient (as the cases of low academic performance suggest), maintaining one's high aspirations may no longer seem realistic.

Students with high perceived status who based their aspirations on these transitory role relationships (often resulting in inflated notions of their own importance) may find that the absence of those relationships in effect destroys the bases and justifications for their perceived status advantages over others in the peer group.

If Coleman's interpretations of the adolescent society are valid, and peer prestige is, in fact, based largely on appearance, clothes, athletic prowess, and dating habits, we should not be surprised that students whose sense of importance in high school rested on these criteria have a more difficult time surviving the greater academic demands of college.

However, this interpretation presupposes, first, that those students who perceive their peer status to be high are actually most highly regarded by their peers; and second, that these "nonacademic" prestige criteria are the primary bases of status allocation.[22] If the former is true, we would expect the correlation between perceived and actual (nominated) peer status to be high, whereas if the latter is true, we would expect the performance of prestige leaders to decline after leaving high school. Since the correlation between perceived and actual status is only .219, many perceived leaders are obviously not regarded as real leaders by their peers. This low correlation clarifies our earlier finding that actual peer status is more strongly associated with college attainment than was perceived status (table 1) Together these two facts suggest that the motivations and characteristics of actual peer leaders may differ from those of many would-be leaders. If the data in table 4 are any indication, the qualities associated with high *actual*, as distinct from high *perceived*, peer status, in no way jeopardize attainment of aspirations.

These figures, like those in table 3, show the percentage of boys with high aspirations who completed more than one year of college. Unlike table 3, however, there is little in these data to suggest that the authentic peer leaders are less likely than others to fulfill their college aspirations. Instead, as the percentage differences at the right show, actual peer leaders are generally more likely to fulfill their college goals, particularly if their family and academic resources are low. For example, 75.0 percent of the twelve boys with high aspirations, top peer status, and white-collar fathers completed more than one year of college, which is somewhat higher than the 69.8 percent success of their sixty-three counterparts with low prestige Although the percentage differences within the low control group are rather sizable, a number of the larger differences are due to the influence of the control variables.

Nonetheless, by comparing the overall percentage differences in tables 3 and 4 for each control group category, we can see that there are consistent advantages to being an actual rather than merely a perceived peer leader For example, among the sons of white-collar workers the influence of perceived status is −19.0 percent (table 3), but the influence of actual status

[22] Data not presented here reveal, for example, that nearly half of the students primarily respect their peers for qualities associated with their academic performance. Only one-fifth cite athletic excellence as a first choice. Similar skepticism regarding the dominance of athletic and social criteria in the schools is voiced by David Friesen (1968).

is +5.2 percent (table 4). The difference between these two figures, 24.2 percent, is the overall advantage in goal fulfillment that accrues to actual status. Of the eight control group differences that are summarized in table 5, six either approach or exceed 20 percent.

Since there is some overlap between perceived and actual peer leaders, the higher fulfillment rates of the actual leaders (those who are apparently correct in their high status assessment) suggest that the lower rates of the

TABLE 4

PERCENTAGE WITH INITIAL COLLEGE GOALS ACTUALLY RECEIVING MORE THAN ONE YEAR OF COLLEGE, BY ACTUAL PEER STATUS AND SELECTED CONTROL VARIABLES

Control Variable	Actual Peer Status: At or Near Top	Middle	Lower	Difference
Father white collar......	75.0	59.5	69.8	5.2
	(12)	(37)	* (63)	
Father blue collar.......	57.1	78.1	43.1	14.0
	(7)[a]	(32)	(58)	
Father high civic.......	70.0	67.6	65.9	4.1
	(10)	(37)	(44)	
Father low civic........	70.0	64.9	51.2	18.8
	(10)	(37)	(82)	
Son high I.Q...........	72.7	78.1	69.6	3.1
	(11)	* (32)	* (46)	
Son low I.Q............	75.0	56.4	51.4	23.6
	(8)[a]	(39)	(74)	
Son high grades........	73 3	81.3	72.7	0 6
	(15)	* (32)	* (33)	
Son low grades.........	60.0	54.8	51.1	8.9
	(5)[a]	(42)	(92)	

[a] Base N too low for reliable percentaging.

* An asterisk located between two percentages in the body of the table indicates that the difference between them is significant at the .05 level or better.

TABLE 5

PERCENTAGE ADVANTAGE IN REALIZATION OF COLLEGE GOALS DUE TO ACTUAL AS COMPARED WITH PERCEIVED PEER STATUS, BY SELECTED CONTROL VARIABLES

Control Variable	Level: High	Low
Father's occupation.................	24.2	1.9
Father's civic affiliations.............	16.8	23.6
Son's I.Q..........................	24.2	23.1
Son's grades.......................	5.3	18.2

NOTE.—Method = table 4 differences minus table 3 differences.

perceived leaders occur primarily among those who exaggerate their status. Because status inflation is linked to lower rates of goal fulfillment (tables 3 and 5) as distinguished from actual educational attainments (table 2B), we might conclude that the "problem" for these students centers around the inflation of their educational goals (in response to their already exaggerated status perceptions) rather than on their objective chances of surviving in college. Although this interpretation seems plausible in terms of our dependent variables, it does not provide an explanation for the underlying bases of either perceived or actual peer status, nor does it account for our earlier finding that the highest peer-group correlate of both goals and attainments is the student's extracurricular participation, rather than peer status of either form.

We noted earlier, for example, that the extracurricular activities provide opportunities not only for diversion, social interaction, and peer-group recognition, but for serious preoccupational role playing as well as leadership and skill development. To the extent that success in school activities is related to the development of a number of capacities and abilities as well as to one's sense of competence and importance vis-à-vis his peers, the extracurriculum (like the academic curriculum) becomes a vehicle from which status perceptions and future aspirations evolve and upon which future success is grounded.

Like formal grades, participation in activities satisfies short-term success needs, confers recognition and status, and supports one's ideas of his own capacities and future opportunities. Those activities with the greatest symbolic value (i.e., athletics, service, and student government) may attract students with strong success orientations as well as provide the visibility and recognition upon which status and future goals are based. On theoretical grounds alone, then, we might argue that the greater the extent of a student's participation in these particular activities, the more likely it is that he should have high aspirations and future success. However, it remains unclear whether each of these particular activities also fosters the development of the abilities and attitudes which facilitate educational success after high school.

To test these relationships, we would have to differentiate among the patterns of extracurricular involvement and examine the rates of high aspiration and college attainment for each group separately. Theoretically, we would expect students active in both athletics and service-leadership roles to have the highest aspirations and attainments, followed by those active in either sports or service alone, followed by those whose activities included neither sports nor service (table 6).

The figures in section A of table 6 show the percentage of students in each participation and control group that express college goals.[23] In general, there are consistent patterns in these data, even though our theoretical

[23] The participation groups were formed by separating students according to their three primarily extracurricular activities. If their lists included sports as well as service or leadership functions they were placed in the "Both" category. Students active in sports but not in service or leadership fell into "Sports." The "Service" and "Neither" categories were based on the same criteria.

ideas were not always confirmed. First, students who are active in both athletics and service have the highest aspirations in nearly every control variable group, the exceptions never exceed 5 percent, and none is close to being statistically significant. Second, students who participate in neither sports nor service activities have the lowest aspirations in nearly every control category. Third, in the low control variable levels, Service alone is the

TABLE 6

PERCENTAGE WITH HIGH EDUCATIONAL GOALS AND ATTAINMENTS BY EXTRACURRICULAR PARTICIPATION AND SELECTED CONTROL VARIABLES

Control Variable	Type of Participation						
	Service		Sports		Both		Neither
A. With College Goals							
Father white collar....	85.7		85.3		95.2	*	64.1
	(21)		(34)		* (42)		(39)
Father blue collar. ...	78.6		66.7		75.0	*	51.2
	(28)		(36)		(40)		(41)
Father high civic.....	76.5		88.5		97.2	*	80.0
	(17)		(26)		* (36)		* (24)
Father low civic......	81.8		70.8		76.9	*	45.9
	(33)		(48)		(52)		(61)
Son high I.Q... . ..	85.0		87.0		97.6	*	70.6
	(20)		(23)		* (41)		(17)
Son low I.Q....... ...	78.6		71.7		74.4	*	54.0
	(28)		(46)		(43)		(63)
Son high grades.	94.1		100 0		97.6		100.0
	(17)		* (13)		* (42)		* (10)
Son low grades...	75.0		73.3		73.9	*	50.7
	(32)		(60)		(46)		(73)
B. With More than One Year of College							
Father white collar....	52.4		55.9		76.2	*	43.6
			*				*
Father blue collar.. .	60.7	*	25 0		57.5	*	26.8
Father high civic.....	64.7		37.0		82.9		54 2
					*		*
Father low civic......	53.1		39.6		57.7	*	24.2
Son high I.Q.........	63.2		55.6		81.4	*	50.0
			*		*		
Son low I.Q....... ...	57.1	*	27.3		56.1	*	29.5
Son high grades......	81.3		78.6		90.2	*	45.5
	*		*		*		
Son low grades.......	46.9		30.0		56 5	*	31.5

* An asterisk located between two percentages in the body of the table indicates that the difference between them is significant at the .05 level or better.

strongest source of aspiration in every case (although its advantages over the Both group are quite low). Fourth, athletes who are also active in service and leadership roles have higher aspirations than their Sports colleagues in all but two control categories. Fifth, the control variables account for significant differences in aspiration levels in all four cases for students in both kinds of activities. The most consistent control group differences, regardless of extracurricular participation, are due to student grades.

Evaluated together, these data clearly suggest that athletics and service-leadership activities are important either as source or maintenance mechanisms for student aspirations, regardless of family SES or student college potential. Service and leadership roles appear to be more important than athletics alone, particularly among those students with marginal family SES and academic resources.[24] The question remains, of course, whether these same factors also account for similar differences in college attainments. The data in section B of table 6 suggest that they do.

The percentage with more than one year of college is generally highest for students in both kinds of activities, nearly as high for Service, consistently low for those active in Neither during high school, but variable for those in Sports, depending upon the level of the control variable. Within three of the four low SES and college potential categories, for example, the percentage of athletes with more than one year of college is no higher than for those in the Neither group. Athletes with high SES and academic resources, on the other hand, are about as likely to succeed in college as their Service counterparts.

Although the role of athletics seems ambiguous at this point, the advantage of participating in both sports and service during high school compared with neither is clear. In all but two of the eight control categories, the percentage of students with more than one year of college in the Both groups is approximately twice as large as in their respective Neither groups (roughly 83 to 48 percent among the "highs," and 57 to 28 percent among the "lows"). Does this also mean, however, that the chances of fulfilling one's initial aspirations are twice as great for these same students? According to the data presented in table 7, the answer is no.

These data suggest, in fact, that the students least likely to fulfill their degree goals are generally not those in the Neither group, but the athletes who lack experience in service and leadership roles. In only two of eight comparisons are the Neither students with high goals less likely than athletes to reach the second year of college. The Sports students, on the other hand, have the lowest fulfillment rates in four of the eight control categories, three of which occur in the low SES and academic potential levels. In two additional cases, they virtually share the lowest rates. When family and academic resources are low, these boys are only about half as likely to fulfill their goals as athletes who also devoted time and energy to service and leadership activities. Their success rates average 38 and 71

[24] These findings point to two major, though perhaps unavoidable, shortcomings in Rehberg and Schafer's work. First, they failed to differentiate between athletes who were active in other kinds of extracurricular roles; and second, they did not follow the athletes to see how well they fulfilled their aspirations.

percent, respectively. The Both group has the highest fulfillment rates in all but one case, ranging from 70.0 to 85.7 percent.

The conclusions concerning the influence of athletic participation on educational goals and goal fulfillment must be equivocal at best, since the impact varies with the presence or absence of other variables. When athletics are combined with service or leadership, the results are usually higher than service alone, suggesting that sports and service activities reinforce each other beyond the influence of either variable alone. Further, the impact of athletics depends on the extent of the student's family and academic resources. For most students with high resources, sports alone has almost the same effect on aspirations or attainments as service alone.

TABLE 7

PERCENTAGE WITH INITIAL COLLEGE GOALS RECEIVING MORE THAN ONE YEAR OF COLLEGE BY EXTRACURRICULAR PARTICIPATION AND SELECTED CONTROL VARIABLES

	Type of Participation			
Control Variables	Service	Sports	Both	Neither
Father white collar....	55.6 (18)	58.6 * (29)	82.5 (40)	60.0 (25)
Father blue collar.....	72 7 * (22)	33.3 * (24)	70.0 * (30)	42.9 (21)
Father high civic....	76.9 * (13)	39.1 * (23)	85.7 * (35)	60.0 (20)
Father low civic ..	59.3 (27)	50.0 (34)	70.0 * (40)	42 9 (28)
Son high I.Q......	64.7 (17)	65 0 * (20)	80.0 (40)	75.0 (12)
Son low I.Q......	68 2 * (22)	36.4 * (33)	75.0 * (32)	44 1 (34)
Son high grades...	75.0 (16)	76.9 * (13)	82.9 (41)	50.0 (10)
Son low grades.....	63.6 * (24)	36.4 * (44)	70.6 (34)	51.4 (37)

* An asterisk located between two percentages in the body of the table indicates that the difference between them is significant at the .05 level or better.

But when these resources are absent, students in sports alone not only have lower aspirations and attainments than those in service only, but their goal fulfillment is also decidedly lower. The extracurricular key to both success orientation and later attainment for these students appears to lie solidly in service and leadership roles rather than in sports. Although sports appears to stimulate aspirations by virtue of its visibility and apparently short-lived status rewards, it does not by itself provide the skills and resources necessary for subsequent success in college. Most low-resource students without service and leadership experiences in high school apparently lack the repertory of attitudes, abilities, and motivations needed to sustain them in college. When faced with the realities of college academic

demands, and in the absence of these critical resources, many students either amend or abandon their degree goals.

Since our interpretation of the data in tables 2 through 5 contains rather similar arguments, it would seem that the students who exaggerate their peer status (and then fail to fulfill their inflated educational goals) are more likely than others to be active in sports alone. If this is the case, we would be forced to explain whether sports itself, or the resulting exaggeration of peer status, accounted most for these low fulfillment rates. According to the data in table 8, both factors are involved.

TABLE 8

PERCENTAGE WITH INITIAL COLLEGE GOALS RECEIVING MORE THAN ONE YEAR OF COLLEGE, BY EXTRACURRICULAR PARTICIPATION, ACCURACY OF PEER STATUS PERCEPTIONS, AND SELECTED CONTROL VARIABLES

	Participation and Status Perceptions			
	Sports Only		Combined Service	
Control Variable	Inflated	Accurate	Inflated	Accurate
Father white collar	60.0 (10)	57.9 (19)	53.3 * (15)	81 4 (43)
Father blue collar	25.0 (8)[a]	37.5 (16)	66.7 (15)	73 0 (37)
Father high civic	36.4 (11)	41.7 (12)	71.4 (14)	88.2 (34)
Father low civic	50.0 (8)[a]	52.0 (25)	50.0 (18)	71.4 (49)
Son high I.Q.	66.7 (6)[a]	64.3 (14)	46.7 * (15)	85 7 (42)
Son low I.Q.	25.0 (12)	42 9 (21)	70.6 (17)	73 0 (37)
Son high grades	33.3 (3)[a]	80.0 (10)	66 7 (15)	85.7 (42)
Son low grades	35.3 (17)	37 0 (27)	52.9 (17)	70 7 (41)

[a] Base N too low for reliable percentaging.

* An asterisk located between two percentages in the body of the table indicates that the difference between them is significant at the .05 level or better.

Although the dependent variable in table 8 is the same as that in tables 3, 4, and 7, the independent categories differ. Students with inflated perceptions of their own status are those who classify themselves at or near the top of the status hierarchy (the Highs in table 3) but who do not fall into the top two levels of actual status (the Highs in table 4). The remainder are called Accurate, although there are a few students among them with less auspicious misperceptions.[28] (The Combined Service category is the sum of the Service and Both categories in table 7.)

[28] This category contains students whose status perceptions were accurate, a few who thought they fell in the middle range but were actually low, and a few who underestimated their actual status.

Again, rather consistent patterns appear in the data. First, in fourteen of the sixteen comparisons, with participation held constant, students with inflated status perceptions have lower fulfillment rates than students with accurate perceptions. The two reversals are very small and nonsignificant. These differences, weighted by the size of the *N*s involved, average 16.8 percent.[26] Second, with status perceptions held constant, students with some service or leadership experience have higher fulfillment rates than athletes in thirteen of sixteen comparisons. The three exceptions are also small and nonsignificant, and the net weighted difference across the entire table is 26.7 percent. By adding this weighted net percentage difference to that attributable to status perceptions, we can conclude that net of any control factor the average chance of fulfilling one's aspirations is 43.5 percent greater for students with service experience and an accurate perception of their peer status than for athletes who inflate their status.

These findings show that student extracurricular participation and status perceptions account for much more variability in goal fulfillments than any family status or academic factor. While demonstrating that a considerable amount of athletes' failure to realize their educational goals can be traced to their inflated status perceptions, these data also suggest that students improve their chances of survival in college more from service and leadership activities than they do from sports. In several control categories, in fact, athletes with accurate status perceptions were less likely to fulfill their goals than service students with inflated perceptions.

A third pattern in these data emerges from an examination of the *N*s on which these percentages are based; that is, sports participants who inflate their status come disproportionately from middle-class homes (ten of eighteen), but they lack outstanding intellectual ability (twelve of eighteen) and do only mediocre academic work in high school (seventeen of twenty). However, their counterparts with service experience are comparatively less likely to have a white-collar father (fifteen of thirty), a low I.Q. (seventeen of thirty-two), or to display unspectacular academic achievement (seventeen of thirty-two). In other words, pure athletes who inflate their status apparently are victims of our traditional exaggerations of varsity sports in the secondary schools. By contrast, participants in service activities who inflate their status have more ability and a stronger academic orientation. The implications of these findings are discussed below.

CONCLUSIONS

The results of our analysis point to some major sources of student aspirations and success that have been largely neglected in sociological research. Our main finding is that the student's role in the high school peer group is a definite source of his success goals, particularly when his attitudinal, financial, intellectual, and academic resources are low. Participation in certain extracurricular activities (especially athletics) is strongly associated

[26] The technique used to compute this figure is called the Weighted Net Percentage Difference and was first described by Davis (1964, p. 125). Although computationally simpler, it yields results very similar to the standardization technique developed by Rosenberg (1962).

with having high status perceptions. This feeling of being recognized an important in the peer group in turn stimulates a desire for further statu and recognition after high school. Since the most visible and widely ac cepted form of success-striving is college, educational aspirations becom for many a proxy for high status and personal recognition. The extra curriculum serves as a means toward this end both by providing oppor tunities for success that lie outside the formal academic structure and b helping students to develop attitudes and skills that will bolster thos aspirations.

The system backfires, however, when activities such as athletics stimu late students' status perceptions and future goals without providing th skills and orientations requisite for their fulfillment. Since exaggerate status perceptions and educational goals are often accompanied by mar ginal intelligence and weak academic commitment, the disappearance c the peer status structure and its institutionalized conventions of prestig allocation at the end of the senior year suddenly forces these students i particular to reexamine their resources for achievement. When family er couragement and role models are present, or when intellectual accomplish ment in high school is outstanding, or when leadership capacities have bee developed, the dissipation of peer-based rewards is less threatening. Bu when peer recognition is the exclusive source for success aspirations, th fulfillment of these aspirations is much more problematic. The surviv beyond high school for such students is considerably less likely than fc their peers with sounder resources.

To conclude that peer-based sources of educational aspirations shoul be discouraged would be premature, for without goals there is little likel hood of achievement. To examine these activities and the skills and att tudes they engender would be a more fruitful inquiry. We have seen alread that the opportunities and demands inherent in service and leadershi roles appear to provide a more solid base of preparation than do those c athletics. Even status inflation has less deleterious effects on the goal fu fillment of students with these experiences.

Why athletics receive so much attention, demand so much effort, an yet fail to sustain student success orientations is still unclear. One explana tion that emerges from these data is that sports may be viewed by man students as an alternative to, rather than complementary to, the academi mission of the school. To the extent that major status rewards are availabl without requiring that students also be more than nominally interested i learning, the chances of exaggerated status perceptions leading to unful filled educational aspirations remain high. Increasing the rewards availabl to participants in more productive or creative activities could help t reduce some of the special attention paid to athletics.[17] But as long a colleges and universities continue to devote huge sums for recruiting an glamorizing athletes, many high school lettermen may be perfectly justifie in viewing college as a largely nonacademic experience.

[17] Coleman (1965) emphasizes this as one means of restructuring the nature of compet tion and cooperation in the high school.

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Income and Stratification Ideology: Beliefs about the American Opportunity Structure[1]

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When ideologies are stated as normative and general tenets, they tend to be accepted. This study hypothesized (1) that in an industrial community, the acceptance of the ideology of opportunity would decrease when its tenets were viewed as specific situations confronting persons of unequal economic rank, and (2) that endorsement of the tenets, expressed either in general or in situational terms, would be withheld more often by lower-income people than by those from higher-income strata. Confirmation of the hypotheses suggests that ideological adherence is greatest among those who profit most from the reiteration of the ideology.

IDEOLOGY AND STRATIFICATION

Social stratification may be defined as the generational persistence of unequal distribution of valued rewards in a society. An ideology is a set of emotionally held beliefs and myths that account for social reality. The ideology of a stratification system explains and vindicates the distribution of rewards in an actual society or in a society believed to be possible,[2] and contains both normative and existential statements about the way things ought to be and the way things really are.[3] Thus, in American society a man who works hard ought to get ahead, does get ahead, and in getting ahead proves he has worked hard. By definition, then, a dominant stratification ideology justifies the distribution of power and rewards in the society. Transmitted by the communication and educational channels, this ideology becomes the "public ideology" which most social scientists study.

The integrative function of an ideology is high when all strata of the society support its tenets and concur in its mode of application.[4] Ideologies

[1] This project was supported by grant no. 91-24-66-45 from the U.S. Department of Labor, Office of Manpower Policy, Evaluation and Research, pursuant to the provisions of the Manpower Development and Training Act of 1962. We are grateful for the department's support.

[2] We do not follow Mannheim's distinction of ideology as a myth of an ongoing system and utopia as a myth of a system believed to be possible (Mannheim 1954).

[3] For the elaboration of concepts of normative and existential elements in ideology, see Form and Rytina (1969).

[4] The idea that an ideology plays a societal integrative function and the idea that an ideology serves to consolidate the power of an elite parallel two conceptions of the func-

lose this integrative character when people in various strata either reject the goals implicit in the ideology or believe that its tenets have little or no validity; that is, when they feel that the institutions of a society are failing to implement desired societal goals.

The major assumption of this study is that all strata in the United States generally accept the normative tenets of the American ideology of equality of opportunity, the description of how things ought to be. But we expected some reservation, especially among lower strata, in accepting the idea that American institutions are effective in implementing the opportunity norms. Probably most adults in literate societies tend to test their life situations against the existing ideology. Since the symmetry between normative and existential tenets of an ideology is generally higher for upper strata, they are less inclined to test the validity of its existential tenets. The reverse situation probably is true for lower strata. In closely integrated social systems, the differences among the strata may be small, especially if the stratification ideology is buttressed by religious beliefs, as in the Indian caste system. In such cases one may indeed speak of a "theodicy of stratification," or the need to justify the suffering resulting from the inequality which God has ordained (Weber 1946, pp. 275–77). In urban-secular societies, strata will probably vary in the degree that they test the validity of an ideology's existential tenets.

Most sociologists probably assume there is wide support for the normative aspects of the ideology of equal opportunity (Smelser 1967, p. 8; Lipset 1963, p. 101), but current unrest among some segments of American society indicates that belief in some aspects may be more problematical (Miller and Rein 1966). Clearly, most studies have tested adherence to the ideology as it is expressed in general, ideal, or normative terms. It is relatively easy to obtain a consensus with regard to vague statements on how a system ought to and does operate.[5] Such statements, especially as presented in most public opinion studies, do not concretize the tenets of an ideology. The acid test of a system which offers money as its main reward, especially from the point of view of people in lower strata, is whether a person who is poor has the same opportunities as a person who has more money. The problem for this research was to devise a technique which permitted people to respond to both (*a*) general statements about how the American opportunity system operates and (*b*) specific statements of how the system operates for persons in different economic strata.

RESEARCH DESIGN

Two major hypotheses guided this research: (1) all income strata will tend to agree more with highly generalized statements than with situationally specific statements about the operation of the American opportunity sys-

tion of a stratification system: as a societal integrator (Parsons 1953) and as a political formula of the elite (Mosca 1966, p. 240).

[5] Ossowski (1963, pp. 110–13) has pointed out that on a high level of generality the normative structure of the American and Soviet stratification systems are very similar

tem, but (2) lower strata will show less agreement than higher strata with both types of statements. This hypothesis was based on the proposition that for most people income is the most salient stratification variable.

The major areas of ideology explored were:

1. The existence of an open opportunity structure in the United States, the equality of chances for upward and downward occupational mobility, and the relative opportunity for mobility in the United States and in Europe. These areas focus on beliefs concerning the relative openness of the economic institution.

2. The relative accessibility of educational resources to all strata as the vehicle for mobility.

3. The impartial functioning of the political and legal systems.

4. Personal or social responsibility for economic status or rank. We hypothesized that those with higher incomes support tenets of personal responsibility for a person's economic status, while the poor place greater reliance on social structural explanations, which would follow from the belief that, for the poor, the economic, educational, political, and legal institutions fail to operate in accord with democratic norms of equality of opportunity.

Annual family income was used as the major independent variable in this study for two reasons:

First, one of our research aims was to discover how poor people perceive the structure of economic opportunity; for poor people, the most salient reward of the stratification system is probably income. If income is combined with incommensurate variables, such as occupation or education, the synthetic scale that results "will be concerned with social consciousness rather than objective position" (Ossowski 1963, p. 56). However adapted to a particular environment, there is no a priori way of knowing whether the components of the scale have equal salience for all strata.[6] Annual family income, however, cannot be equated with class situation as Weber defined it (Weber 1946, p. 181), nor is monetary income a completely adequate indicator of the economic position of a person (Miller and Rein 1966, p. 433); nevertheless, although the income data obtained for this study are inexact,[7] they are sufficient to classify a respondent as rich, middle income, or poor.

The second reason for using income as the major variable is that we wanted to discover whether the rich support the tenets in the stratification ideology differently than other strata. Because they are a small part of the population and, consequently, of samples, most studies include the rich in a stratum with persons whose income is only a few thousand dollars above median family income. Yet the opinions of the rich may have dispropor-

[6] Ossowski (1963, p. 55) says that a synthetic scale is the result of the predilections of the evaluating individual because "in different social classes the particular criteria of class affiliation carry a different weight."

[7] For example, we obtained information only on the incomes of the household head and/or spouse, not for other dependents. Nor did we attempt to obtain information on income-in-kind.

tionate influence because they contribute great financial support to political parties.[8] Such an assumption enables one to interpret the finding of McClosky et al. (1960, p. 416) that, on social welfare measures, Republican followers tend to have much the same opinions as Democratic followers, while Republican leaders are far more conservative. A reasonable assumption is that the leaders reflect the views of those who support them financially, namely, the rich.

Finally, our problem was to construct interview items which would elicit adherence to general and situational tenets in the ideology of opportunity. Because statements derived from the dominant ideology tend to sound like clichés, they probably represent "what everybody knows," and, consequently, most respondents would tend to agree with them. Such general statements are often not meaningfully nullifiable. For example, the statement, "Ambitious boys can generally get ahead," does not specify whether "getting ahead" means rising a few points on the NORC scale or crossing a major occupational boundary (e.g., from clerical to professional). In order to obtain a more meaningful response, we elaborated a technique developed by Prothro and Grigg (1960) and Westie (1965), who presented highly generalized normative statements followed by specific ones of application. An example of a general statement is, "Minorities should be free to criticize the majority," while a specific statement is, "If a person wants to make a speech against churches and religion in this city, he should be permitted to."

In using this technique, we first presented to respondents a highly generalized statement on opportunity derived from the dominant ideology; later in the interview we presented a statement similar in logical content but specifically linking opportunity and income. All statements were worded in "either-or" form because some investigators have suggested that lower-class people tend to agree with any positive statement regardless of substantive content (Campbell et al. 1960, pp. 510–15; Christie and Jahoda 1954).

Respondents were heads of households or their spouses who, in December 1966–January 1967, lived in the area included in *Polk's City Directory* (1965) for Muskegon, Michigan, an industrial community whose Standard Metropolitan Statistical Area population in 1960 was 149,943. For the larger study of which this report is a part, a systematic sample ($N = 186$) was drawn. Because such samples typically include few respondents at income extremes, we drew supplementary samples of rich and poor.[9] The small number of rich in the systematic sample did not justify running statistical tests of significance for income strata. "Rich" was defined as annual family income of $25,000 or more which, in the 1959 Census, was the top 1 percent of the income distribution. "Poor" was defined in terms of a scale adjusted

[8] Heard (1962, pp. 46–48) says that "it has long been realized that the bulk of the income received by formally organized *national-level* campaign groups from individual contributors has arrived in sums of $500 or more. . . . Only people of means can make even a $100 contribution. Consequently, the forces of wealth dominate the political life of the nation."

[9] Any definition of poverty is arbitrary. For definitions similar to the one used, see Keyserling (1964), Orshansky (1965), and Miller (1965).

for the number of dependents; for example, a respondent was poor if his annual family income was less than $3,500 for four persons.

The analytic sample ($N = 354$) upon which this paper is based consisted of the systematic sample and the supplementary samples of rich and poor. By strata of income and race, the analytic sample included 37 poor Negroes, 70 poor whites, 48 middle-income Negroes, 152 middle-income whites, and 47 rich whites. The per capita income for the Negro poor was $671; for the white poor, $907; for middle-income Negroes, $1,591; for middle-income whites, $2,310; for rich whites, over $6,000. The sex division in each stratum was almost even. Education was associated with income: three-fifths of the respondents with 0–7 years of education were poor, and three-fifths of the college graduates were rich. We shall report Negro responses separately because there is ample evidence that Negro and white experiences with the opportunity structure differ greatly. All findings must be regarded with great caution because of the small sample.

FINDINGS

Background findings show that about three-fourths of the respondents in all income strata liked Muskegon as a place to live and work. Respondents were also asked to identify themselves as middle, lower, working, or upper class.[10] A little more than half identified with the working class, and a little less than half with the middle class. In a series of questions designed to tap interest in making money, Negroes and poor whites showed the highest interest, and larger proportions of them reported having fewer economic opportunities than "other people." These and other data point to the importance of money to lower-income strata and their feelings of economic deprivation. These feelings are also reflected in their attitudes toward economic opportunity.

Beliefs in the Tenets of Economic Opportunity

Three tenets of the ideology of economic opportunity were explored: the importance of working hard for "getting ahead," the relevance of father's occupation to getting ahead, and whether occupational mobility is easier in the United States than in European countries. According to the main hypothesis, we expected more agreement with the general statements than with the specific statements, but we also expected respondents with higher incomes to show greater agreement to ideological tenets, however stated.

A general statement on economic opportunity was adopted from Campbell et al. (1954, p. 221):

> Some people say there's not much opportunity in America today—that the average man doesn't have much chance to really get ahead. Others say there's plenty of opportunity and anyone who works hard can go as far as he wants. How do you feel?

[10] The question was adapted from Centers (1949). For a discussion of the consequences of using a forced choice or free choice question to ascertain class identification, see Gross (1949).

From this statement we derived an income-linked specification:

> Do you think that a boy whose father is poor and a boy whose father is rich have the same opportunity to make the same amount of money if they work equally hard, or do you think that the boy whose father is rich has a better chance of earning a lot more money?

In response to the general statement, over eight-tenths of the white respondents and less than six-tenths of the Negroes thought that America is a land of equal opportunity (see table 1). But in response to the income-linked statement almost three-fifths of the rich, a half of middle-income and poor whites, and less than one-fifth of the Negroes thought that rich and poor boys had equal opportunity (see table 1).

TABLE 1

BELIEFS ON CHANCES TO GET AHEAD AND TO GO TO COLLEGE BY INCOME AND RACE (PERCENTAGES)

Income and Race	Plenty of Opportunity (General) (*a*)	Rich and Poor Have Equal Opportunity (Income-Linked) (*b*)	Equal Opportunity for College (General) (*c*)	Poor as Likely to Be in College (Income-Linked) (*d*)
Poor:				
Negro	56	11	22	11
White	90	47	57	38
Middle:				
Negro	58	21	41	28
White	80	49	75	37
Rich:				
White	93	57	96	43
Total, analytic sample:				
%	78	42	64	34
(*N*)	(342)	(351)	(348)	(344)
Total, systematic sample:*				
%	76	41	69	38
(*N*)	(177)	(184)	(184)	(181)

* For race, col. (*a*)—$\chi^2 = 4.35$, df = 1, $p < .05$; col. (*b*)—$\chi^2 = 4.03$, df = 1, $p < .05$; col. (*c*)—$\chi^2 = 4.91$, df = 1, $p < .05$.

Since sociologists commonly use occupation of father rather than family income as the base point for studies of occupational mobility, we decided to ask respondents about the relationship of father's occupation to mobility. Situational questions reflected significant mobility, that is, crossing a major occupational stratum boundary.

The first question pertained to upward occupational mobility:

> Who do you think are more likely to become business executives and professional men: the sons of big business executives and professional men, or the sons of factory workers and small businessmen?

The second situational question pertained to downward occupational mobility:

> Who do you think are more likely to become factory workers and small businessmen: the sons of factory workers and small businessmen, or the sons of big business men and professionals?

The questions must have appeared almost fatuous to the respondents because nine-tenths or more of all income groups felt that occupational inheritance was more likely than upward or downward occupational mobility (see table 2). Although none of the poor Negroes thought that sons of fathers in lower occupational strata had more chances for upward mobility than other sons, almost one-fifth of them thought that sons of executives had more chances for downward mobility than sons of fathers in lower strata. Perhaps there is some comfort in the thought that, if one's own sons

TABLE 2

BELIEFS CONCERNING GENERATIONAL MOBILITY AND OPPORTUNITY STRUCTURE IN AMERICA COMPARED WITH EUROPE, BY INCOME AND RACE (PERCENTAGE WHO AGREE)

Income and Race	Blue-Collar Son More Likely to Become Executive (a)	Executive Son More Likely to Become Blue-Collar (b)	Opportunity Better in America (c)
Poor:			
Negro	0	19	16
White	11	6	9
Middle:			
Negro	4	4	7
White	8	3	19
Rich:			
White	9	0	30
Total, analytic sample:			
%	7	5	16
(N)	(344)	(347)	(351)
Total, systematic sample:*			
%	6	2	15
N	(178)	(180)	(184)

* For middle income and poor, col. (c)—$\chi^2 = 4.95$, df $= 1$, $p < .05$.

are not likely to rise, the sons of men in prestigious occupations may fall. We may well ask, if the question used in the interview situation seemed fatuous, do similar general or normative statements of the ideology repeated in everyday life also appear fatuous? Surely, people must test public ideologies against their daily life experiences.

Popular patriotic orators often proclaim that opportunity is greater in America than in European countries. Lipset and Rogoff have presented evidence casting doubt on the validity of such proclamations, but they nevertheless assumed that the belief was "traditional and universal" in the United States (Lipset and Rogoff 1954; Lipset and Bendix 1959). On the assumption that this belief is most supportive to the strata which have "made it," we predicted that the rich would be most likely to believe it and

the poor least likely. Using situated class referents, we asked the respondents:

> Do you believe that ambitious sons of lower class fathers are able to rise into the middle class in most European countries like Germany, France, and England, or do you think that such ambitious boys can rise only in the United States?

Unfortunately, the statement used did not call for a judgment of relative mobility rates, although some respondents (mainly, 19 percent of the rich and 32 percent of college graduates) gave a free response, indicating that mobility was possible in Europe but easier in the United States. About one-sixth of the total sample responded that mobility was possible only in the United States, or that it was easier, but three-tenths of the rich and four-tenths of the college graduates endorsed the "myth" (see table 2). The responses obtained to this question cast some doubt on the universal acceptance of the idea that the United States has a more open opportunity structure than Europe.

In conclusion, the responses to the three statements on economic opportunity indicate considerable range and certainly no unanimity in support of the public ideology. Moreover, when family income and father's occupation are specifically mentioned in ideological statements, the degree of support for them is greatly reduced. Yet the rich consistently see greater equality of opportunity than the poor, except in the occupational structure where the bulk of the respondents, rich and poor, white and Negro, see the general tendency of occupational inheritance. Even when the opportunity structure of the United States is compared with that of Europe, there is a general consensus that little or no difference exists.

Operation of Educational, Governmental, and Legal Institutions

A basic tenet of the ideology of opportunity is that educational resources needed for occupational mobility are equally available to all. Similarly the government, the law, and the courts are supposedly blind to conditions of birth. General and situated questions involving education, government and the law were devised to tap how different economic strata evaluated their functioning.

The general statement on education concerned the chance to go to college:

> Do you feel that all young people of high ability have fairly equal opportunity to go to college, or do you feel that a large percentage of young people do not have much opportunity to go to college?

The income-specific corollary was:

> Do you think that most young people in college come from families who can give them financial help or do you think that young people whose parents are poor are just as likely to be in college as anyone else?

The pattern of responses to the general question was similar to that dealing with economic opportunity, that is, greater support by the higher income strata and the whites. However, the range of responses among the

strata was much greater, from one-fifth support by poor Negroes to total support among the rich (see table 1). For the income-linked statement, there was a uniform decrease in support by all income groups, about one-half the proportions agreeing with the general statements. Responses to both types of statements show a much smaller degree of confidence in equal access to education in the United States than the literature suggests (Cremin 1951; Coleman 1968; Williams 1967).

Education is primarily governmentally sponsored in the United States. Does this relative lack of confidence in the ability of the educational institution to function equitably hold for government itself? A basic tenet of democratic ideology is that the imperfections in the system are reparable—that the system is self-adjusting in response to inequities because voters are able to demand and generally get what they think the system should supply. The market analogy is clear. People who are trained to believe in political pluralism feel that all income strata should have equal influence on the operations of government and other social institutions. To explore adherence to this tenet, we prepared the following general statement on the opportunity to obtain political equality through participation in the electoral process:

> Some people think that voting is a vital part of the governmental process in this country, while others think it really doesn't make much difference who gets elected because the same people go on running things anyway. What do you think?

The income-linked specification:

> Some people say that, regardless of who gets elected, people who are rich get their way most of the time, while others say that people who are poor have just as much influence in government as people who are rich. What do you think?

Almost nine-tenths of all the respondents thought that voting was vital, the rich most of all and the poor Negroes least of all (see table 3). Agreement with the specific statement shifted dramatically downward, with only three-tenths supporting it. The lower the income strata, the less the belief that wealth played no role in influencing governmental policies. Poor whites were the exception, for their rate of support was the same as middle-income whites. Similar findings appeared for different educational levels. However, the range of differences among the educational strata was smaller than for the income strata, and this again points to the "softening effect" of the educational variable.

Equality before the law was the last institutional tenet of American ideology we examined. The general statement was:

> A number of people believe that in America everyone gets equal and fair treatment from the law, while others believe that the police and courts are basically unfair in the administration of justice. What do you think?

The income-linked corollary:

> Do you think that, if he breaks the law, a rich man is just as likely to end up in jail as a poor man, or do you think it's a lot easier for a rich man to stay out of jail?

A clear majority of the white respondents, irrespective of income, agreed to the general statement, but only a minority of the poor and middle-income Negroes agreed (see table 3). In the income-linked corollary, the data clearly reveal that all income strata do not support the tenet of a fair legal system, for only one-fifth or less of the respondents in all strata felt that the courts operated equitably. When responses to the general and situated questions dealing with the legislative branch of government are compared with those dealing with the courts, there seems to be considerably less confidence in the operation of the judicial branch of government.

TABLE 3

BELIEFS ABOUT LEGAL AND POLITICAL EQUALITY, BY INCOME AND RACE (PERCENTAGE WHO PERCEIVE EQUALITY)

Income and Race	Voting Influences Government (*a*)	Rich and Poor Influence Government Equally (*b*)	Law and Courts Are Fair (*c*)	Jail Equally Likely for Rich or Poor (*d*)
Poor:				
Negro:	76	3	46	8
White	88	30	75	23
Middle:				
Negro	89	15	27	20
White	89	30	59	20
Rich:				
White	94	55	75	22
Total, analytic sample:				
%	88	29	58	20
(*N*)	(303)	(345)	(340)	(343)
Total, systematic sample:*				
%	91	35	60	21
(*N*)	(182)	(172)	(177)	(178)

* For middle income and poor, col. (*b*)—$\chi^2 = 4.34$, df $= 1$, $p < .05$; col. (*c*)—$\chi^2 = 4.41$, df $= 1$, $p = .05$ For race, col. (*c*)—$\chi^2 = 12.84$, df $= 1$, $p < .01$.

Why Are the Rich, Rich and the Poor, Poor?

What makes some people rich and others poor? The implications of this question are political. The traditional ideology is specific. Wealth is the result of hard work, ability, motivation, and other favorable personal attributes. Wealth is earned and deserved. Poverty is the result of laziness, stupidity, and other unfavorable personal attributes, and it too is earned and deserved. People in a society get what they deserve, and the social structure is just. Since justice prevails, changes in the social structure are rarely needed. In testing support for these beliefs, we expected that those who have the most of what there is to get would be most likely to define the system as just. We therefore expected that the higher the income, the greater the tendency to assign personal factors as causes of wealth or poverty; and the lower the income, the greater the tendency to assign social structural factors as causal.

Respondents were first asked two open-ended questions, why are rich people rich, and why are poor people poor?[11] The answers were coded as pointing to personal attributes, to social structure, or to a combination of these. Only the responses which were solely in terms of personal attributes are presented in the tables. The rich are much more convinced than others that wealth is a result of favorable personal attributes; 72 percent of the rich and 17 percent of the poor Negroes felt this way (see table 4). As one rich white man said, "Inheritance is the exception today. If you have to

TABLE 4

PERSONAL ATTRIBUTES AS A CAUSE OF INCOME BY INCOME AND RACE (IN PERCENTAGES)

Income and Race	Wealth (*a*)	Poverty (*b*)	Being on Relief Last Six Years (*c*)	Poor Don't Work as Hard (*d*)	Poor Don't Want to Get Ahead (*e*)
Poor:					
Negro	17	17	28	3	0
White	34	30	46	13	19
Middle:					
Negro	29	19	45	4	6
White	35	41	59	30	29
Rich:					
White	72	62	78	39	46
Total, analytic sample:					
%	37	36	54	21	23
N	(350)	(341)	(347)	(343)	(347)
Total, systematic sample:*					
%	31	40	57	25	25
N	(183)	(177)	(185)	(186)	(180)

NOTE.—In the wealth column, the percentages represent those who saw favorable traits as a "cause" of wealth, in the poverty columns, unfavorable traits as a "cause" of poverty. The residual categories for the wealth column would include respondents who indicated both personal and structural responses as causal, and those who saw only structural factors as causal.

* For race, Col. (*b*)—$\chi^2 = 10.29$, df = 2, $p < .01$; col. (*c*)—$\chi^2 = 9.63$, df = 2, $p < .01$; col. (*d*)—$\chi^2 = 4.85$, df = 1, $p < .05$; col. (*e*)—$\chi^2 = 7.6$, df = 1, $p < .01$.

generalize, it's the self-discipline to accumulate capital and later to use that capital effectively and intelligently to make income and wealth." An opposite point of view was held by a poor Negro: "The rich stole, beat, and took. The poor didn't start stealing in time, and what they stole, it didn't value nothing, and they were caught with that."

The rich are also much more convinced than the poor that poverty is the result of unfavorable personal attributes. Six-tenths of the rich and 17 percent of the poor Negroes supported this idea (see table 4). The same general pattern of responses to the two questions was found when the data were analyzed by the educational level of the respondents. Support for the

[11] A number of respondents wanted to know the definition of "rich." Very few raised questions about the definition of "poor." Respondents were told that "rich" and "poor" meant whatever they meant to the respondent in the context of the Muskegon area.

ideology increased directly with educational level, but the differences between educational extremes were smaller than for the top and bottom income strata.

The explanation for being on relief was similar. Only about 5 percent of the total sample thought that people were on relief during the Great Depression because of personal attributes. But four-fifths of the rich and three-fifths of the middle-income whites thought that relief status in the past six years was the result of personal characteristics, while less than half of those in other strata thought so (see table 4). One rich man reported, "People on relief just don't want to work. I'm biased. I run a plant where we try to hire men and they just won't stay." Another rich man said, "It's an easy way to receive their allotments. It's just too easy. Like ADC and that kind of stuff. To me, it's just criminal." In contrast, a poor Negro woman reported, "I've been on for six years or more and it's because I can't make enough on a job to take care of my six kids."

Hard work and motivation to get ahead are also basic tenets in the ideology of opportunity. Respondents were first asked:

> Naturally, everyone can think of exceptions, but on the whole, would you say that poor people work just as hard as rich people, or do you think that poor people generally don't work as hard as rich people?

Although only one-fifth of the total sample felt that the poor do not work as hard, two-fifths of the rich but almost no Negro respondents thought so (see table 4).

Respondents were then asked about the attitudes of poor people toward getting ahead:

> Do you think that poor people want to get ahead just as much as everyone else or do you think that basically poor people don't care too much about getting ahead? Please try not to think of individual exceptions you know of, but rather in terms of the group in general.

About one-fourth of the respondents thought that the poor did not want to get ahead, and the response variation was like that of the previous question (see table 4).

CONCLUSIONS

Empirical studies of ideologies are only primitively developed in the social sciences, and we hope that this research provides some suggestions about how to proceed further in this study. Obviously, national studies are sorely needed in this area, for any community study necessarily has limited generalizability. However, our hypotheses seem to be verified in the community studied. There is far from universal acceptance of the tenets of the American ideology of opportunity, even when those tenets are enunciated in the most general and vague terms. There is even less acceptance of statements in which economic inequality is made the test for accepting a tenet on equality of opportunity. The shift downward in degree of support of a tenet from its general statement to concrete specification is not a surprising finding. This phenomenon has been observed in research whenever situa-

tions are specified (Centers 1949; Prothro and Grigg 1960; Jones 1941). Our data confirm the hypothesis that the support of an ideology is strongest among those who profit most from the system which the ideology explains and defends, the rich in this case. In addition, the data reveal that people from various economic strata differ in their evaluation of the effectiveness of different institutions to implement the ideology of opportunity. Such differences are also found between Negroes and whites.

We may reasonably assume that ideologies are most firmly held when they are accepted as given and not concretely tested in life situations; yet scientific analysis of ideologies cannot proceed without ascertaining how firmly the public supports them when they are enunciated in both normative and existential terms. Apparently social scientists do not know what everyone else seems to know, that people test the validity of public ideologies concretely in everyday life. We are inclined to conclude from our data that there is less "false class-consciousness" than most social scientists assume. The best audience of an ideology is the audience which profits most from its repetition. Others may not really be listening, or not listening well.

It is important for social scientists to study how firmly various segments of the community adhere to various ideological tenets, for data from such studies should provide information needed to predict the formation and activation of social movements. Clearly, such data should be gathered periodically, so that historical trends in the degree of support for old ideologies and the emergence of new ideologies can be discerned. Participation in social movements occurs when large proportions of the people in certain strata believe that institutions are not functioning to meet societal norms. They then feel that the norms must be changed or support for them must be withdrawn. In both cases, the universality of collective representations is reduced. Our data show that some people are facing a second American dilemma by questioning how they can support the ideology of opportunity in the face of massive intergenerational poverty. The dilemma is being resolved differently by people who are located differently in the social structure. We have focused on the income variable in this study, but obviously other indicators of social location are important and need to be studied. Research on ideology must become the study of the layman's sociology of the society in which he lives. Only when sociologists have this picture clearly, can they elaborate a theory on the ideology of stratification.

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Book Reviews

Achievement in American Society. Edited by Bernard C. Rosen, Harry J. Crockett, Jr., and Clyde Z. Nunn. Cambridge, Mass.: Schenkman Publishing Co., 1969. Pp. 653. $11.25 (cloth); $5.95 (paper).

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Responding to the high valuation placed upon occupational achievement in American society, this book deals basically with the questions: who achieves, what contributes to achievement, what hinders it—and why? The answers are presented in thirty-seven of the most important articles published in the last twenty years on achievement in American society. Rather than adopting a single-factor explanation of achievement, like the moralistic perspective which views achievement as one's reward for the development of a highly valued character structure, or like the intellective perspective according to which achievement depends entirely on intelligence, the editors, taking achievement as a complex phenomenon, chose the dual approach of both personality and social structure. On the psychological level, they try to establish the relationship of such personality variables as motivation, values, and aspiration to achievement; on the social structure level, they examine the effects of various social structures (microsociologically: family, peer group; macrosociologically: race, ethnicity, school, bureaucratic organizations) upon achievement. The book as a whole has a number of shortcomings which cannot all be attributed to the newness of a field which a writer as early as Max Weber has already treated:

1. The historical dimension has been completely neglected. Max Weber attributes the rise of capitalism to the spirit of Protestantism which he describes in terms of most of the components entering the achievement syndrome. We would be interested in knowing what importance achievement orientation had in nurturing American capitalism, and what changes this influence has recently displayed. Has it increased or decreased?

2. Similarly, since we are not told how important achievement is in comparison with past periods, there is also a lack of a cross-cultural dimension. While this may be due to the fact that the study is confined to the United States, there is hardly an excuse for not analyzing how important achievement really is in the United States today. Which function does it really play in the working of our economy? A study of the relationship between achievement and labor productivity would have been most interesting.

3. It is on the same line that alternatives functionally equivalent to achievement (whatever the functional frame of reference may be) are not discussed. There must be functionally equivalent alternatives; or are all members of our society who lack achievement marginal? Although never explicitly stated, there seems to be a firm belief in the creed of the necessity of achievement motivation for the functioning of our society.

4. Points (2) and (3) may be largely due to the dominance of a psychological and sociopsychological perspective. This would explain the absence of a purely sociological analysis of the system of status allocation, specifically, the extent to which social statuses are allocated on the basis of achieved and of ascribed criteria. Merely showing the existence of achieve-

ment orientation (or the existence of ascription) does not suffice for such an analysis; after all, achievement and ascription occur in all societies.

5. Many of the articles reveal a strong tendency to corroborate hypotheses. Nonsignificant results are either neglected or interpreted by ad hoc explanations. This fails to exploit the opportunity to increase our knowledge, the progress of which, according to K. R. Popper, depends so much on refuted hypotheses.

6. Most articles are of a rather limited scope, leading to short-range theories. Despite the very useful summarizing introduction of the editors, no overall synopsis presenting a general or at least middle-range theory of achievement is given.

7. As in many other readers, there is a tendency toward quantity. Quite a few relatively irrelevant articles could have been omitted.

Despite its shortcomings, the book is a most useful collection of articles for everyone interested in achievement.

Black Families in White America. By Andrew Billingsley. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1968. Pp. v+218. $4.95.

Life Styles in the Black Ghetto. By William McCord, John Howard, Bernard Friedberg, and Edwin Harwood. New York: W. W. Norton & Co., 1969. Pp. 334. $2.95 (paper).

Edward E. Harris

Indiana University

Black Families states that the Negro family cannot be understood either in isolation from the broader society and community or by concentrating on its fragments, a particular form of family life, or its negative functions. The Negro family can best be understood in terms of its relationships with the institutions of the Negro community and the broader society. The writer's description of the Negro family as a social system is pointedly different from the description by Daniel P. Moynihan and others.

Billingsley traces the Old World heritage of the Negro family and the impact of social forces on it in the New World. Different patterns of impact are described for the United States and Latin America, although the author's primary interest is in the American scene. He focuses on the impact of slavery, the problems of the Negro family during Reconstruction, and the other forces which served as obstacles to full development as well as those forces contributing to achievement. The information is not necessarily new but is relevant to the author's purpose. The sociohistorical discussion is followed by a consideration of how certain families achieved social prominence as a result of personal striving, family support, and, to some extent, support from the society. This discussion anticipates the chapter which deals with social status in the Negro community.

Social status is described by various criteria which make it possible to place the "Black Brahmins" at the top of the status hierarchy. The "Black Brahmins" are the Negroes who have reached the top primarily as a result of the life chances they inherited from their families, or orientation, and/or their heritage from families who occupied a privileged position in slavery.

The new Negro upper class is composed of families who have achieved

positions of prominence and have emerged from obscurity. Billingsley sees middle-class families as those who are employed in various occupations requiring college training and the lower class as ordinary people who remain relatively unknown but are self-sufficient and law abiding. Other families are described as "poor and Black"; life for them may be getting worse. The book concludes with a consideration of prospects for changing the status of unsuccessful families, some strategies for reforming the social effort to help families, and an appendix on the Negro family in American scholarship.

In general, the author is successful in his attempt to describe the Negro family in terms of interdependent relationships. To a great extent, the interdependent relationships are inferred, but this presents no serious problem for the trained reader. However, the absence of greater explicitness makes the reading somewhat dull for those who want more than description in a sociological analysis. The appendix contains a highly revealing and more exciting discussion as the author accounts for the state of American scholarship on the Negro family. This book has a wide range of uses.

The second book is a collection of papers on the urban Negro. The purpose of the authors is to focus on various parameters of the urban community as sources of change among Negroes, and on Negroes in cities as a stimulus for change within the urban scene.

Part 1, "The Negro and the City," opens with a discussion of "urbanism as a way of Negro life." It describes problems associated with the Negro ghetto as opposed to a more general consideration suggested by Louis Wirth's classical essay on a similar topic. This paper is followed by descriptive account of the Texas State University riot and another one on Watts, before and after. Both papers contain some good documentary information.

Part 2, "Individual Life Styles," contains some much needed public opinion data and other analyses of materials which reflect the spirit of the ghetto, the motivations and feelings of its inhabitants. It includes comparative public opinion data on various issues from one city to another, from other-worldly and this-worldly church members, attitudes about life chances by occupational division, and other qualitative and opinion data. The last paper deserves special comment since it discusses collective as opposed to individual life styles. The paper focuses on the ways in which the tempo and patterns of riots varied in Watts, Houston, and Detroit, and in Negro colleges and other situations.

This book should be of interest to those in the areas of public opinion, collective behavior, race relations, and riot behavior, as well as those specifically concerned with the urban Negro.

The Politics of School Desegregation: Comparative Case Studies of Community Structure and Policy Making. By Robert L. Crain, with the assistance of Morton Inger, Gerald A. McWorter, and James J. Vanecko. Chicago: Aldine Publishing Co., 1968. Pp. xviii+390. $7.95.

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For some time now, theoretically inclined sociologists have called for systematic comparative research on social organization and change to overcome some of the problems of generalizing from isolated case studies. This

has been particularly true in the area of community power analysis. Simultaneously, action-oriented colleagues have alerted us to the urgency for problem-focused research to meet the charge of irrelevancy. Few national problems are of more central contemporary concern than the school desegregation issue. Robert L. Crain's *The Politics of School Desegregation* is an imaginative attempt to respond to both of these needs. As such, it is a timely and important study in the tradition of Williams and Ryan's classic review of school desegregation (Robin M. Williams, Jr. and Margaret W. Ryan, eds., *Schools in Transition* [Chapel Hill, Univ. North Carolina Press, 1954]), but one which is considerably more sociologically ambitious.

Crain's focus is upon the identification and analysis of the local factors involved in community decision-making responses to challenges to certain arrangements which affect the separation of blacks and whites in urban school systems. Claiming that a review of the desegregation literature failed to yield any hypotheses for testing, and lacking any theoretical framework of his own, Crain adopts an admittedly commonsensical interest-group approach. His research strategy was to undertake a "total analysis" (p. 6) of the ways in which fifteen large cities responded to attempts to desegregate their school systems in the 1959–65 period in an effort to identify their common and distinguishing factors. Eight of the cities selected were from northern or border states and seven from the South, all of which have populations between 250,000 and 1,000,000 and black populations of at least 10 percent.

Impelled to economize on data-collection techniques, Crain dispatched teams of two or three interviewers seriatim to each city. In one week each team collected "several pounds of printed documents" (p. 8) and conducted an average of twenty-two interviews with school board members, civil rights movement leaders, local informants (i.e., newspapermen and social scientists), and selected local influentials. Although the assignment must have been extremely difficult to accomplish in only seven days, this dime-in-the-meter interview and document-collection strategy was the only reported source of data used in the study. Doubtless, methodologists of nearly any persuasion will find the effort severely wanting, and some might question its utility even as a hypothesis-generating exercise, which is its only essential claim. The sample, drawn by a much "modified random . . . scheme" (p. 7), is too small and of dubious representation for the analysis techniques employed.

Ethnographically, the nine case studies presented are little more than superficial sketches. There was no structured interview schedule, and survey protocols varied across the cases examined. The respondents are of unknown representativeness and, except perhaps for those school board members interviewed, were selected on inexplicit criteria. The documents collected suffer from the same inadequacies and apparently were not content analyzed. Furthermore, the important role played by subjective assessment at key points in the analysis might lead those so inclined to charge interpretive bias and nonreproducibility. Nevertheless, Crain recognizes all these methodological weakness, and I am impressed with the skill and ingenuity exhibited in manipulating and interpreting the data and with the general plausibility of most of the findings. It is an important substantive pilot study despite its theoretical inadequacy and many methodological compromises.

Because of the major differences between desegregation decisions in the

North (responses to the de facto issue) and in the South (responses to the de jure issue), Crain was obliged to present and analyze his findings separately for each region.

More than two-thirds of the book is devoted to the presentation and analysis of the data from the northern sample cities: Baltimore, Bay City, Buffalo, Newark, Lawndale, Pittsburgh, San Francisco, and St. Louis. (Because of objections raised to Crain's interpretation by key interviewees, he assigned the thinly disguised pseudonyms of Bay City and Lawndale for cities readily identifiable by anyone familiar with the recent desegregation literature.)

First, it was found that the desegregation decision processes were triggered by demands from civil rights groups (usually the NAACP) or from racially mixed neighborhood groups, not from black political leaders, civic leaders, or all-black neighborhood groups. The initial reaction to the demand was a negative one based on allegedly pragmatic educational grounds, and usually it came from a school superintendent with a narrow and defensive ideology. However, with only one exception, the major decisions were made by the school board and not by the superintendent or civic officials. Furthermore, Crain found the amount of civil rights and segregationist activism to be contingent upon the school boards' response, not the reverse. He rank-orders the eight cities in his sample on an intersubjectively established "Acquiescence Scale," and then examines the relationship of selected community variables to acquiescence. Region, socioeconomic status of white population, and size of black population were all found to be not significantly related to school board acquiescence to desegregation demands. What he did find to be significant, however, were the liberalism of individual board members, school board cohesiveness, and the recruitment procedure for board members.

Crain indicates further that school boards comprised of high-status political amateurs tend to be more liberal than those with political professionals, and that the proportion of politically appointed board members is a good predictor of liberalism. Furthermore, school board cohesiveness was found to be positively associated with the size, hierarchical structure, and exclusively political professional or exclusively nonpolitical membership character of school boards. Crain also shows that school board cohesiveness and acquiescence are, in turn, related to the existence of a strong political party or a mobilized civic elite (a "class" comprised of high-status, noncompetitive businessmen with the shared goals of "general economic development," "reform," "improvement of public welfare" and "maintenance of social stability" [pp. 208–10]).

Clearly, Crain's major theme is this crucial role played by the so-called civic elite in community decision making. Civic-elite control is shown to be inversely related to the suburbanization of high socioeconomic status families. After constructing a simple typology of cities, Crain concludes his analysis of the northern cities with the assertion that "the least acquiescent cities are those which have no upper-class," whereas the most acquiescent cities are "those which have an upper-class and a working class but no middle-class" (p. 219).

Crain's curt presentation of the seven southern cities' responses to court-ordered desegregation is much more superficial. He attempts primarily to account for the different experiences in the cities in his sample. New Orleans and, to a much lesser extent, Jacksonville, experienced considerable con-

flict, whereas the other southern cities (Atlanta, Baton Rouge, Columbus, Miami, and Montgomery) acquiesced relatively peacefully. Crain suggests that the major differences among the southern cities in their responses to demands for desegregation are due to the ideological stances of their elites. School board acquiescence in cities like Atlanta and Miami was found to correlate highly not with the conflict tolerance, social status, or civil rights liberalism but rather with the modernizing ideologies of their elites. In contrast, the traditional ideologies of the elites of New Orleans and Jacksonville are accorded interpretive primacy by Crain. These postulated ideological differences are thereupon shown to be related to other community characteristics, such as white-collar occupational primacy, economic growth, and educational level.

The last four chapters of the book are brief. Two deal with the correlates of urban civil rights movements in the North and the South, and the other two summarize Crain's interpretations of his findings on desegregation and policy making.

Despite the study's many problems, Crain and his associates at the National Opinion Research Center have produced a significant monograph which hopefully will inspire others to undertake similar imaginative comparative research.

Social Class and Social Policy. By S. M. Miller and Frank Riessman, New York: Basic Books Inc., 1968. Pp. xi+302. $7.95.

Peter Morris

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"This book is directed towards both professionals and citizens. It seeks to influence professional's behavior in two ways: by improving their technology, the way they work with clients and pupils; by involving professionals more profoundly in the development of social policy and social change." "Our argument insists upon the significance of technology. At a time when there is much discussion of institutional imbalances and inadequacies, it is sometimes unrecognized how important it is to improve the performance of professionals (and paraprofessionals) at the level of the job they are to do. While it may be necessary to change institutions in drastic ways, there is a dearth of knowledge and understanding of how to perform certain tasks more effectively. Much of our work has moved along this particular line."

These passages from Miller and Riessman's concluding chapter (pp. 275, 279) define the central purpose of the essays collected and merged in *Social Class and Social Policy*. And it is as well to read this last chapter first, for both the title and the opening section tend to set the reader off in the wrong direction, looking for relationships which are not taken up. The definition of poverty in terms of relative command over resources, political and social as well as monetary; the cross-classification of the poor by economic security and familial stability; the mistrust of cultural inadequacy as a theory of poverty, all point toward an analysis in terms of the class distribution of resources, and the mechanisms which sustain, or might reverse, inequalities. But these themes of the opening chapters are not pursued. As the book develops, it discusses class only as a cultural inhibition,

which prevents the middle-class professional from understanding, respecting, and serving well his "new working-class" client. Its central argument concerns the development of professional skills adapted to the life styles of the poor.

The book is sharpest when it criticizes the culture-of-poverty theory, Operation Headstart, and the "psychiatric world view" (an anathema rather vaguely located in the earlier works of Erich Fromm, William H. Whyte and David Riesman). In each of these, Miller and Riessman object above all to an emphasis on the psychological handicaps of the poor. They argue that what is perceived as a handicap is often only a difference; that if a working class child lacks some middle-class skills, he possesses others just as valuable; that the idea of a handicap is itself determined by class-biased values. At the same time, preoccupation with personality structure tends to divert attention from the social structure, implying that changes in the environment are too late. You cannot straighten the branches of a crooked tree, only tend more carefully the new growth. Miller and Riessman repudiate this approach, as they also question the political determinism which would deny the value of all reforms within the present structure of power. Though they call their position radical reform, its distinguishing quality is that it does not search for change in the roots either of personality or power but rather in the development of new techniques.

They apply their approach principally to education and mental health. They are impressed with the possibilities of role playing as a means of learning, with the employment of nonprofessional aides, with the aggregation of services in educational parks or professional centers. Each reader will choose, among their dozens of suggestions, those which most take his fancy. I liked particularly the ideas of teaching English by exploring the nuances of meaning and equivalence between standard and dialect speech (*cool* means *nonchalant* but has its own resonance), of getting people to teach as a means of learning themselves, of creating jobs for "expeditors"—agents drawn from the local community, who act as go-betweens, helping clients to find their way about service agencies and also representing their own interests (though, as Miller and Riessman recognize, this can be a difficult and ambiguous role to play).

These ideas seem attractive and plausible, but they stand, for the most part, on the authority which the humanity, good sense, wide experience, and creative insight of their authors gives them. The book is informed rather than informative. Evidence is only briefly mentioned, and few actual experiments in innovation are described, even incidentally. The argument proceeds from statements of principles to proposals for reforms, taking both the truth of the principles and the viability of the reforms more or less for granted. The style is straightforward, clear, and repetitive, a continual exhortation to be more flexible, more boldly experimental, to cast aside received ideas. Occasionally whole paragraphs reiterate, in different words, the same energetic appeal to change and adaptability. Hence the book does not really show, as the authors hoped, "how social science can contribute to action and may be molded and developed through the attempt to utilize it" (p. ix). It shows, rather, how two imaginative and knowledgeable social scientists can contribute to policy and develop their approach—which is not quite the same thing. Wisdom is rarer and more valuable than science, but can it fight the self-protective conservatism of professional practice by enlightenment alone? The ideas here presented need to be complemented, I

think, by a more inductive analysis of how present practice fails and what innovations do in fact achieve, and by an inquiry into how professional institutions can be brought to accept change. Meanwhile, these essays argue persuasively for their point of view and draw from it techniques which seem well worth testing.

Social Stratification in Contemporary Czechoslovakia

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This article presents some results of an extensive sociological-statistical survey of social stratification in Czechoslovakia in 1967. The operationalization of major variables is described. The problem of the dominant stratification is solved in favor of the following group of cultural variables: complexity of work, education, style of life. The taxonomic analysis reveals four major strata and three large inconsistent groups. An unexpectedly high "subjective" manifestation of objective stratification is another finding of the research. A preliminary interpretation in terms of relation to types of social stratification leads to the conclusion that relations of the socialist, egalitarian, bureaucratic, and technocratic types played the most significant role at the time when data were collected.

BASIC CHARACTERISTICS OF THE STUDY

In this paper[1] we present some results of several years intensive work by a large team of Czechoslovak sociologists and statisticians concerned with the survey of social stratification of Czechoslovakia (Machonin and others, 1969).

Czechoslovakia, a small but relatively highly industrial country in Central Europe with a rich tradition of intellectual culture and democratic and national political movements, has gone through deep social changes in the past twenty-five years, inspired by Marxist ideas and accomplished by Communist policy. We—who explicitly stressed in the research that we try to apply in our work the Marxist philosophical and general sociological approach—have been participants in or at least witnesses to these changes. As social scientists, we saw—like many of our colleagues—that our duty was to contribute to a more thorough and objective awareness of the new social reality than has so far been described.

In order to get a detailed insight into the global social structure, we favored a macrostructural and sociological-statistical approach, reckoning at the same time with an investigation of similar problems at the level of mezzostructure in the next phases of our work. This fact naturally underlines the "sociographical" function of the research, impeding, however, a detailed and thorough concentration on some subtler aspects of the functioning of the social system. The "subjective" aspects of the social structure have been studied to a limited degree only. Such research cannot encompass an international context and the links of the Czechoslovak social system

[1] This article is a part of a book, *Czechoslovak Society: Sociological Analysis of Social Stratification*, which is to appear in the near future in Czech and Slovak.

to it. Research of this type has its advantages as well as a lot of methodological difficulties.

We have tried to overcome one organic flaw of research of this type, that is, a certain tendency to a static perception, by simultaneously pursuing both vertical social differentiation and vertical mobility. The latter is now a subject of a careful interpretation, the results of which will be published later on.

The very nature of the subject chosen for research suggests that the basic units of the investigation are male heads of families. (There are 13,215 in the sample, i.e., about 0.5 percent of this category of persons in Czechoslovakia.) The sample is a result of a random two-stage selection and is representative for the population studied. From those questioned, we obtained some data, in less detail, about their wives, their eldest sons and daughters, fathers, fathers-in-law, friends, and the heads of other families with whom they were on friendly terms.

For 1967 we have data concerning 12,265 wives, 4,546 sons, 4,545 daughters, and 2,910 (living) fathers. The data were collected in November and December 1967.

OPERATIONALIZATION OF MAJOR VARIABLES

We cannot describe in this article all of the results gained from all the procedures we used. The first attempt in our study was to give a description of Czechoslovak society in terms of an "average" multidimensional general index of social status on a six-point scale. This index was derived from the scores on five different scales: complexity of work, cultural level of leisure activities and consumption (life style), participation in management (power), education, and income. Each of these dimensions was fixed, too, on a six-point scale. The scales are described on the opposite page.

Another description was carried out in terms of economic position—specialized employees; clerks; skilled, semiskilled, unskilled workers; agricultural workers; cooperative and individual farmers, etc.—or of "class position," that is, economic position reduced to the simplest large categories—nonmanual, workers, cooperative farmers, private.

Results based on this kind of data were elaborated in the form of common contingency tables, diagrams (stratification pyramids), etc. Approaches using intercorrelations were applied where possible, including factor analysis. Let us give first a simple example of a consideration based on a survey of correlation coefficients. We used Spearman's coefficient of rank correlation for contingency tables (ρ).

STRATIFICATION DOMINANT

Before our research started, we formulated three possible explanations of the issue of stratification dominant (which partial vertical social differentiation was the most significant determinant of an individual's position in Czechoslovakia in 1967): (*a*) the complexity of work; (*b*) participation in

Breakdown of the Five Scales Constructed to Describe Social Stratification in Czechoslovakia

I. Complexity of Work (Examples)

(Operationalization based on assessment by qualified judges)

1 Physician-specialist, director of an industrial enterprise, minister, university professor
2 Engineer, physician, secondary schoolteacher
3 Foreman, planning worker in an enterprise, primary schoolteacher, repair serviceman of an automatic machine (line)
4. Skilled factory worker, policeman, secretary
5 Semiskilled factory worker, cooperative farm worker, shop assistant, taxi driver
6 Unskilled worker, porter, street sweeper

II. Cultural Level of Leisure

Activities and Consumption (Life-Style)

(Operationalization based on scalogram. Each of the characteristics implies many others. The upper categories possess as a rule the "positive" characteristics of the lower ones)

1. Owners of cars, people spending their leaves abroad
2 Owners of libraries and visitors of art exhibitions
3 People spending leave outside their community, spending their leisure in public activities or sports, or having different hobbies
4 People following reviews, owners of refrigerators
5 Owners of TV sets, living in an apartment with basic equipment
6. People without "positive" characteristics

III. Participation in Management

(Operationalization based on a complex index including following indicators: position within the management of the work organization, "level" of elected bodies in which the respondent develops voluntary political activities)

1 All "managers" of the most powerful organizations, for example, ministers; managers of the organizations on the second degree of power influence, for example, president of a trade union if occupied there with voluntary functions at least on the level of a county or of an economic branch; people with subordinates occupied in the most powerful organizations with voluntary functions at least on the same level as in the previous case

2.
3 Different combinations of the indicators mentioned
4

5 In the "best" cases: people occupied in the organizations on the second degree of power influence without subordinates and with no voluntary political activities; people with subordinates (not managers) occupied in the least powerful organization and with no political functions; people with functions on the district level and without any authority stemming from occupational position
6 People without any authority based on occupation (working in smaller plants or other organizations without any significant power influence and having no subordinates) and possessing no influence on the basis of voluntary political activity within elected bodies

IV. Accomplished Education

1 Higher education
2 Secondary education
3. Lower vocational education
4. Elementary education and apprenticeship
5 Either elementary education or apprenticeship
6 No education finished

V. Income

1. More than 2,500 Czechoslovak crowns
2. 2,001–2,500 Czechoslovak crowns
3. 1,751–2,000 Czechoslovak crowns
4 1,501–1,750 Czechoslovak crowns
5. 1,251–1,500 Czechoslovak crowns
6. Less than 1,251 Czechoslovak crowns

The final scales are based on some rather arbitrary procedures; they are themselves subjects of further validization.

management; (*c*) "class position" expressed in traditional categories, that i "intelligentsia," working class, peasantry. The empirical data showe further alternatives.

From this table it is easily seen that the highest correlations have bee found for the complexity of work and for life-style, and somewhat low correlations for education, while class position and participation in manag ment indicate much lower correlations.

Thus this survey—like a lot of other approaches—testifies to the fa that it was the set of cultural differentiations[2] that determined the fram

TABLE 1

SURVEY OF CORRELATION COEFFICIENTS OF POSSIBLE STRATIFICATION DOMINANTS WITH THE OTHER IMPORTANT VARIABLES OF THE ECONOMICALLY ACTIVE RESPONDENTS IN 1967*

	POSSIBLE STRATIFICATION DOMINANT				
VARIABLES	Complexity of Work	Life-Style	Education	Participation in Management	Class Position
Complexity of work	..	538^{4}	*.652*^{1}	.542^{3}	605^{2}
Economic position	.729^{1}	549^{4}	604^{2}	.552^{3}	
Life-style	.538^{2}		608^{1}	.443^{3}	302^{4}
Life-style of the family	382^{1}		347^{4}	352^{3}	360^{2}
Dwelling	.369^{2}		*418*^{1}	304^{3}	312^{4}
Objects owning	350^{2}	. .	*416*^{1}	307^{3}	292^{4}
Cultural level	.509^{2}		*584*^{1}	.426^{4}	473^{3}
Participation in management	*.542*^{1}	.443^{3}	.443^{4}	..	526^{2}
Participation in management stemming from occupational position	551^{1}	.433^{4}	.451^{3}		531^{2}
Voluntary participation in management	237^{2}	244^{1}	216^{4}		236^{3}
Number of functions	.320^{3}	.323^{2}	.287^{5}	*505*^{1}	309^{4}
Membership in Communist Party of Czechoslovakia	.252^{3}	231^{4}	206^{5}	*.321*^{1}	281^{2}
Education	*652*^{1}	608^{2}	.	.443^{4}	569^{3}
Income	432^{3}	*.446*^{1}	442^{2}	.430^{4}	386^{5}
Income per capita	.273$^{3-4}$	*338*^{1}	.279^{2}	.214^{5}	.273^{3-}
Standard of living	.443^{2}	*541*^{1}	440^{3}	.399^{4}	372^{5}
Attributes of social status (life-style, education, income)	*.638*^{1}	.	.	.520^{3}	560^{2}
Size of community	.295^{4}	*401*^{1}	.374^{2}	.216^{5}	317^{3}
Bohemia and Slovakia	.158^{3}	*.331*^{1}	.246^{2}	.142^{4}	.125^{5}
Character of district (industrial maturity)	196$^{3-4}$	*327*^{1}	.267^{2}	.188^{5}	196^{3-}
Occupational group	310^{4}	346^{3}	.358^{2}	275^{5}	*532*^{1}
Self-ranking	*.382*^{1}	.340^{5}	347^{4}	.352^{3}	360^{2}

* Superscript figures give the order of the coefficients in the line. Coefficients left out in cases of dep dence in measurement.

[2] A term referring to our theoretical concept of "primary culture," including level of p ductive forces, education, science, standard of living, way of life in leisure, degree urbanization, etc.

work of social stratification in Czechoslovakia in 1967. What position man will attain in society is primarily and in a decisive way determined by his occupational position, his leisure activities, and education (an element which apparently connects, as the basic attribute, the occupational position with the out-of-occupational one as a prerequisite or source of these positions). Even though complexity of work plays a most significant role, we do not view the results of our investigation as conclusive evidence of our hypothesis that vertical occupational differentiation plays the determining role, because it has been surprising to us that it forms in our conditions a close unity with the two other cultural components of social status.

"Class position," though an important vertical dimension of social stratification in Czechoslovakia, is not, however, its determinant. It can be almost completely reduced to other social differences (especially to those based on the division of labor and consequently on the complexity of work, on education and qualification, on life-style); inverse reduction is not, however, possible.[3] In this respect, our hypotheses have been fully confirmed.

Participation in management also represents a significant partial vertical differentiation. However, by comparison with the set of cultural components it retreats so much into the background as not to be explained by any errors in the operationalization or methodology of our research. There is only one possible explanation: our study of the macrostructure of the society has indicated rather truthfully that there were minimal differences in the participation in management among the masses of the society in 1967. This could not, of course, manifest itself as a basic differentiating element of the society with regard to the other indices.

This does not necessarily imply that the political power and organizational system did not play any significant role in influencing social stratification at that time. In the macrosurvey we did not and could not get a detailed insight into the top, the very elite, the highest bearers of power and their stratification characteristics (not because our sample was not representative, but because of the fact that the real top is formed in any country by a relatively small group). Above all, we could not perceive the mechanisms of power influences affecting the shaping of stratification. We could only presume their influence by, for example, the distribution of the standard of living, which, through its equalization and significant incongruency toward cultural components, reveals the existence of outer and noneconomic pressures—of course, not only political ones.

On the other hand, we can claim positively that no matter how sharp the division of power and how great the equalization and incongruency of income, they could no longer prevent people from differentiating in work and especially during leisure according to cultural parameters of a modern society. Even an analysis of the governing categories revealed that their structures were determined to a considerable extent by qualification and achievement, that is, not by "purely" political viewpoints.

[3] The class position was measured independently of the other variables.

The activities which the people pursued during leisure corresponded roughly to their education and their occupational ranks because they were able to distribute their equalized and not always adequate incomes in diverse ways (in spite of additional equalizing pressures in their families). This again was in accordance with their education and abilities. A certain role was apparently also played by the growing importance of nonoccupational activities, given (1) by the general, though not very rapid cultural development in this sphere (e.g., by the increase in household equipment; by the possibilities for tourism abroad; by the development of arts, science, education) and (2) by the extraordinary attention paid to this sphere by people who did not possess enough possibilities of other activities (e.g., in the sphere of voluntary organizations or of legal small business).

RESULTS OF TAXONOMIC ANALYSIS OF DISLOCATION PATTERNS OF STATUS COMPONENTS

Considerations based only on elementary statistical data suffer from some vagueness: they showed the internal structure of Czechoslovak society in a number of partial and rather abstract sections. Therefore we planned other procedures which would provide a deeper insight into the real groupings of people and which would enable us to perceive these groupings more specifically rather than in an "averaged image." In the end, these procedures crystallized into the method cited in the headline of this paragraph.

We knew that our stratification pyramids were a very averaged picture of the real social diversity. Even if we could assume that we have chosen all the scales correctly and that they correspond to each other on the whole, we know that there are very few individuals with fully consistent dislocation patterns of status components[4] in the society, and hence, too, in our sample (in our case it is only 149 respondents). Apart from five quite consistent patterns (pattern 2, 2, 2, 2, 2 does not occur in the sample), there are further 1,764 more or less inconsistent ones (this alone is evidence of a certain structural character; we know that the number of these patterns might be theoretically speaking much greater, i.e., 7,776).

CLUSTERS AROUND CONSISTENT CENTERS

That is why we wanted to take a further step: to answer the simplest question concerning the internal structure of "average" strata, that is, what is the cumulation of the individuals around the consistent patterns that we regard as centers (nuclei) of some clusters. Thus we want to create a certain typology of consistency/inconsistency of status patterns. The issue is to distinguish between (1) those with such small deviations from consistent centers that they can be regarded as consistent with those with

[4] The position of an individual in the system of our five major variables can be symbolized by following record: (a, b, c, d, e), where a, b, c, d, e, indicate the attained position on different scales.

somewhat greater deviations, (2) those which we can regard as relatively consistent or semiconsistent, and finally (3) those with pronouncedly inconsistent patterns.

First of all, the computer was given the task of finding the frequency of those patterns which are at most $\sqrt{6}$ points from consistent centers;[5] we consider this distance to be suitable for distinguishing between inconsistent and semiconsistent or consistent patterns. (There is only one of the

TABLE 2

FREQUENCIES OF STATUS DISLOCATION PATTERNS CLUSTERED AROUND CONSISTENT CENTERS AT THE DISTANCE $\sqrt{6}$ AND EXAMPLES OF THE MOST FREQUENTED ONES

	Frequency			Examples of the Most Frequented Patterns	
Pattern of the Center	Absolutely	Percentage of *N*	Percentage of the Classified	Pattern	Frequency
(1,1,1 1,1) . .	70	0 7	1 0	(2,1,1,1,2)	17
				(2,1,1,1,1)	11
				(1,1,1,1,3)	9
(2,2,2,2,2).	542	5.3	6 8	(3,2,2,2,3)	34
				(3,2,1,2,4)	23
				(3,2,2,1,3)	22
(3,3,3,3,3).	1,238	12 2	15 5	(3,2,2,2,4)	40
				(3,2,3,3,4)	39
				(3,2,3,2,4)	38
(4,4,4,4,4) .	2,361	23 6	29 9	(4,4,3,4,5)	61
				(4,4,5,4,5)	54
				(4,4,4,4,5)	51
(5,5,5,5,5). .	3,012	29 9	38 0	(5,5,6,5,6)	100
				(5,5,5,5,6)	92
				(5,5,6,4,6)	64
(6,6,6,6,6) .	689	6 8	8.8	(6,6,6,5,6)	110
				(5,6,6,5,6)	97
				(5,6,6,6,6)	72

NOTE.—*N* = 10,085 respondents. Altogether 7,912 individuals were classified, i.e., 78.5 percent of the sample, in 978 patterns, 791 unclassified patterns are occupied by 2,173 individuals, i e , 21.5 percent of the sample. The order of the variables is the following complexity of work, education, income, life-style, participation in management.

five dimensions where a deviation of two points can occur but none with a deviation over two points.) The "circles" with radii of $\sqrt{6}$ or under overlap, however, so that a pattern within that distance of two consistent centers must be unambiguously classified only to the center to which it is nearest. In cases of an "overlapping competence" of two centers the distance gets in fact smaller (see table 2).

The most important finding to be deduced from these facts is that nearly three-quarters of the sample studied fall into relatively consistent or semi-

[5] Distance, here, is calculated as the square root of the sum of the five squared deviations from the consistent pattern.

consistent groupings. In spite of our reservations about the degree of co-ordination and comprehensiveness of our scales, we must consider this fact as testifying that Czechoslovak society in November 1967 was a relatively stratified one.[6]

OPTIMUM CENTERS

The formation of clusters around consistent centers has several disadvantages, too. Like the procedures used previously, it does not respect the fact that we are dealing with scales that are partly discordant both for objective and subjective reasons, and that, consequently, the consistent patterns need not necessarily represent really consistent statuses. It respects an arbitrarily selected number of centers. It leaves out a great number of inconsistent patterns, does not provide any insight into their structure, and does not enable us to create their typology.

Therefore the computer was given another task: to find in an arbitrary way something like "optimum" centers, that is, those which enable us, for a given distance, to form the clusters according to the "natural" structure of the data so that, on principle, all patterns, even the inconsistent ones, might be classified.

Distances that are too small, for example, $\sqrt{3}$ and $\sqrt{6}$, have not been found very helpful in this procedure, because they lead to a break-up of the sample into an intricate number of small groups which are not suitable for a macrostructural analysis.

Consequently, we chose somewhat greater distances. The clearest structure emerged when the distance $\sqrt{12}$ was used. The difference between the included pattern and the "center pattern" can account for at most three points for one partial status dimension. However, patterns differing in three dimensions by two points, or on two dimensions by two points and on the remaining three dimensions by one point also belong here. The rule about the unambiguous location of the pattern to the nearest center makes the actual distance smaller, but we shall nevertheless have to use another procedure that will overcome the disadvantage of too great a distance. In figure 1, we shall illustrate only those clusters that are theoretically interesting or occupied by a relatively high number—minimally about 5 percent of N.

Centers symbolizing clusters broke up into two groups: the first group includes relatively consistent centers, that is, those in which the value differences on the separate scales are small, and can be explained by a subjectively caused discordance of the complexity-of-work scales or by the different distribution of participation in management.[7] Consistency is referred

[6] Concept of "stratification" is for certain theoretical reasons used here in the sense of Landecker's (1963) "class crystallization," not as synonym of *any* vertical social differentiation.

[7] In spite of arbitrariness in forming the final scale of participation in management, the basic fact is that people without any participation (score 6) form 37.8 percent of eco-

to in the relative sense only, since the downward shift in participation in management really reduces consistency in most cases. We regard as relatively consistent four centers, *A*, *B*, *C*, *D*, that represent about 60 percent of the sample. In our opinion, they should represent the centers of the actual four strata much more precisely than "average" strata according to the six-point scale of general index of social status or the above-mentioned

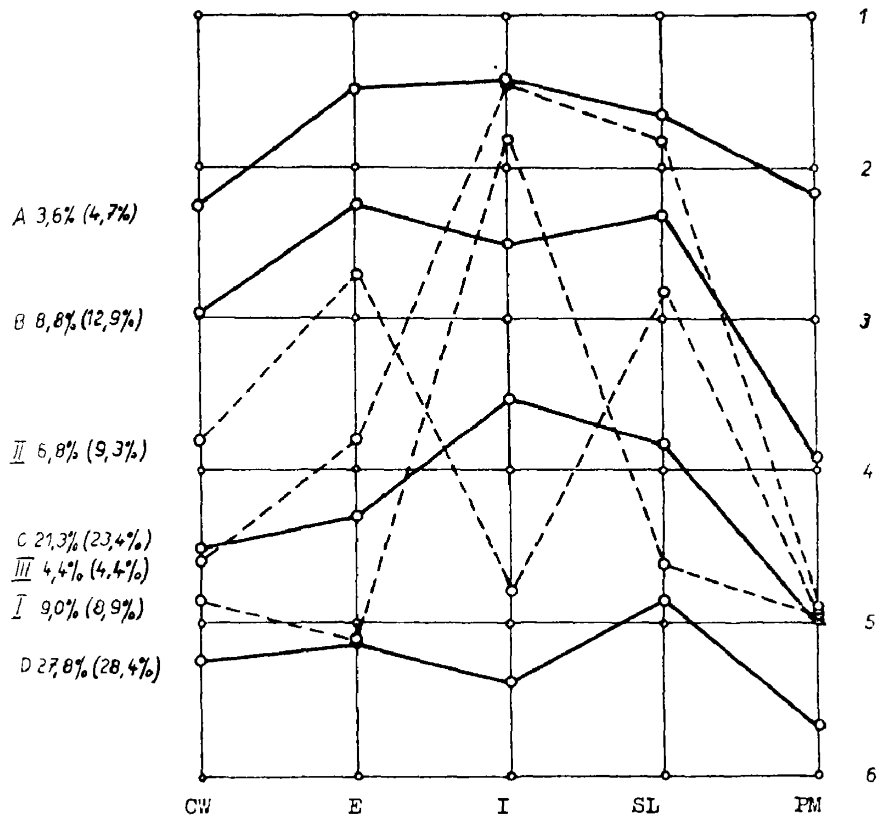


FIG. 1—Optimum centers of clusters of status dislocation patterns at the distance of $\sqrt{12}$ Solid line = relatively consistent centers; dashed line = relatively inconsistent centers. For explanation of the percentages given in brackets, see text. Corresponding numerical data are the following: A = (2.3, 1.5, 1.4, 1.7, 2.1); B = (3.0, 2.3, 2.5, 2.3, 3.9); C = (4 5, 4.3, 3.5, 3.8, 5.1); D = (5.3, 5.2, 5.4, 4.8, 5.7); I = (4.9, 5.1, 1.8. 4.6, 4.9); II = (3.8, 2.7, 4.8, 2.8, 4.9); III = (4.6, 3.8, 1.5, 1.8, 4.9).

"strata" formed around consistent centers. If further procedures verify this premise, then the group with *A* center might be viewed as the upper stratum, *B* group as the upper middle stratum, *C* group as the lower middle stratum, and *D* group as the lower stratum of the Czechoslovak society.

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nomically active respondents and with a very low participation (score 5)—30.0 percent. The consequence of it—a very steep distribution of this variable—cannot be explained in any other way.

On the remaining centers, we are dealing with an inconsistent group, where the divergent values in different dimensions cannot be explained by the discordance of the scales. Figure 1 shows that three groups are the largest.

Center *I* is characterized by low levels of complexity or work, education, life-style, and participation in management, with a very high level of income. It comprises about 9 percent of the respondents.

Center *II*, about 6.8 percent of the respondents, is characterized by relatively high parameters of education (between elementary and secondary education) and life-style, of median parameters of complexity of work, and inappropriately low income, besides low parameters of participation in management (similar to other groups).

Center *III* symbolizes about 4.4 percent of the respondents, approaching, on the whole, group *I* but distinguished by a somewhat higher degree of education on the level of completed elementary education and apprenticeship and mainly by the fact that its members have a life-style corresponding more nearly with a high level of income.

Besides these, eight further centers of small groups have been found, all of them of an inconsistent character. A number of them are interesting for their sharp incongruency in one dimension, namely life-style, income, and participation in management; for example, a group of 2.5 percent of the respondents oscillates around the center, with all but one of the parameters approximating the upper stratum; this group has the lowest participation in management. Another group, comprising 2.7 percent of the respondents, has in all parameters its center on the level of about 3, except that of income, which moves around 1.7.

The greatest incongruencies can be found in the dimension of income, which moves in both directions compared to the levels of complexity of work, education, and life-style, and in participation in management, which is always in the downward direction.

CLUSTERS AROUND OPTIMUM CENTERS

The distances with which we operate here are naturally so great that the frequencies of individual clusters cannot be taken too seriously. Therefore the computer was given a further task: to construct clusters at the distance of $\sqrt{6}$ around the centers stabilized at the distance of $\sqrt{12}$. All seven most frequent centers found at the distance $\sqrt{12}$ (see fig. 1) were taken as bases around which clusters were constructed at the distance $\sqrt{6}$. In this way 92.1 percent of respondents were classified, many more than were classified around the consistent centers. These centers represent so far the best approximation to the "natural" structure of the sample; consequently, we shall operate with it as a basic one, being aware, however, of the fact that the internal structure of group *C* is quite loose and that it will be necessary to verify the significance of group *III* in a more exact way.

The frequencies are distributed in the following way: *A*, 4.7 percent,

B, 12.9 percent; *C*, 23.4 percent; *D*, 28.4 percent; *I*, 8.9 percent; *II*, 9.3 percent; *III*, 4.6 percent; the unclassified rest, 7.9 percent. (These are the percentages given in parentheses in figure 1.) A large percentage of the sample, 79.4 percent, falls into relatively consistent formations.

On the basis of the taxonomic analysis of dislocation patterns of status components, we can formulate the following conclusions at this phase:

Leaving aside the general downward shift of participation in management and the partial income anomaly in group *C*, it is possible to refer to Czechoslovak society in 1967 as a stratified society, that is, one possessing a certain amount of consistency of social status for the overwhelming majority of the population studied.

With the reservation that our present findings will have to be verified by a large-scale reintroduction of the clusters in the whole research, we can say, that most family heads fall into four strata; and we shall try to draw a rough preliminary picture of their characteristics (enriched a little by the first steps of identification of the clusters by help of combination with other variables).

Stratum *A* (4.7 percent), a highly consistent one, includes men with secondary or university education, specialized employees as a rule, with considerable complexity and diversity of intellectual work and a highly cultural way of life during leisure, living very often in big cities, participating in management on the second point of our scale on the average, that is, much higher than any other group (3.3 percent of respondents are in the first and second categories of participation in management) and with median incomes over 2,250 Czechoslovak crowns. The median index of general status is about 1.6.

Stratum *B* (12.9 percent), only slightly consistent, comprises people with secondary education, doing complex but standardized intellectual work mostly, specialized employees as well, with a cultural way of life above the average, living in towns, with average participation in management, and median incomes around 2,000 Czechoslovak crowns. The median index of general status is about 2.8.

Stratum *C* (23.4 percent), a middle consistent one, includes young and middle-aged men, skilled or semiskilled industrial workers, often living in middle towns, most having completed elementary education and an apprenticeship, doing simple manual work requiring training or apprenticeship, with average cultural level of life-style, participation in management either on the lowest rung of the governing hierarchy or as functionaries on the level of a plant or community, with median wages around 1,750 Czechoslovak crowns, that is, a little higher than corresponds to their average complexity of work and education. The median index of general status is about 4.2.

Stratum *D* (28.4 percent), a highly consistent one, represents a grouping of older men, agricultural workers, cooperative peasants, partly semiskilled workers, and individual farmers often living in villages and small towns, doing the simplest manual work, having elementary education

at most, with practically no participation in management, and with median incomes of 1,250 crowns at most. The median index of general status is about 5.3.

The stratification of Czechoslovak society is not, however, a very clear-cut one. Apart from the shift of participation in management, and apart from the relatively disproportionate higher incomes of stratum *C*, the clear-cut character of social stratification is impaired by the existence of a number (7.9 percent) of people with typical inconsistent statuses who do not create any bigger social groups, and, above all, by the existence of two or three typical bigger groups of an inconsistent character that cannot be regarded as strata in the proper sense of the word.

Group *I* (about 8.9 percent), highly inconsistent, includes semiskilled or sometimes skilled industrial workers, often from small towns, working at simple manual labor, with an elementary education or apprenticeship without completing elementary education, with the lowest possible rate of participation in management, with a cultural level of the way of life during leisure below the average; but the median incomes are between 2,000 and 2,500 crowns. It is a very interesting group which, for one reason or other, gets from the society rewards that do not agree with the qualification and participation in management: a group which at the same time does not use its income in an expected cultural way of living during leisure

Group *II* (about 9.3 percent), of medium inconsistency, includes overwhelmingly specialized employees, and clerks living in big cities, qualified for relatively simple kinds of intellectual work, with lower vocational education and slightly above-the-average life-style corresponding to their level of education. Like most middle groupings, they, too, participate in management on the lower rung of hierarchy. Above all, they get much lower rewards than correspond to their level of education (on the average about 1,300 crowns), but in spite of it, their level of leisure activity is above the average.

Group *III* (about 4.6 percent), highly inconsistent, is a group of skilled or semiskilled workers, living in big cities, doing simple skilled work at the lowest levels of management, with abnormally high incomes (on the average over 2,500 crowns), whose leisure activity is highly cultural—something between the lower middle stratum in occupation, qualification, and participation in management, and the upper stratum in consumption.

"OBJECTIVE" AND "SUBJECTIVE" DIFFERENTIATION

In judging the research project, an old but always interesting theoretical dispute emerged again: to what extent is it possible to regard as really existing groups in which a possible correspondence of "objective" indicators can be found, without, however, any "subjective" manifestation of them at the level of social consciousness and behavior. Underlying this dispute was the belief that the prolonged operation of an egalitarian ideology had substantially reduced a spontaneous manifestation of objectively existing

strata whose presence we did assume after all. This belief was expressed in the hypotheses of the research. And what did the research show?

We shall leave aside here the whole range of questions concerning the people's ideas about the arrangement of the society as well as their satisfaction with their social standings. However, we must mention the relations between the objective characteristics of vertical social differentiation and the self-ranking of individuals.

The questionnaire included two questions regarding self-ranking: one from the point of view of "social position," the other from the point of view of the "influence on the management of the society." The answers to these questions provided a basis for the construction of an index of the respondents' self-ranking in the society which was compared with the objective data about the social statuses.

The results are the following. For economically active respondents, the self-ranking index correlates at the following values of ρ: .442 with general index of social status; .384 with the economic position; .381 with complexity of work; .340 with life-style during leisure; .352 with participation in management; .347 with education; .331 with income. All respondents show corresponding values of ρ: .442 for economic positions; .401 for life-style during leisure; .317 for voluntary participation in management; .376 for education; .416 for income.

These values are unexpectedly high if compared with our assumptions. Besides some partial incongruencies corresponding to certain specificities of social consciousness, which are known from other studies (e.g., the specific features of self-ranking of upper and lower strata), a significant rate of agreement was found between the objective social positions and the self-rankings. We are dealing here with the consciousness of a really general status and not of partial ones that, taken separately, correlate significantly lower than general statuses. In stratum consciousness, the general status is thus something relatively alive and more clear-cut than partial statuses.

Unfortunately, there are no data at our disposal to enable us to make a historical comparison. Yet we would like to express our opinion that the clear-cut character of the elementary degree of stratum self-consciousness is an expression of a certain historical process of a subjectively manifested transformation of groups "of themselves" into groups "for themselves."

The small investigation of professional prestige makes it possible at this stage of the work completed by J. Kapr (1969) to make some preliminary conclusions. In spite of the prolonged operation of egalitarian ideology, and our hypotheses that were based on a number of previous partial observations and investigations, the prestige evaluations of individual occupations by respondents correspond highly to those made by experts with regard to complexity of work. Two significant deviations are represented in a higher prestige evaluation of miners and a lower prestige evaluation of teachers of elementary schools, this being a residue of the egalitarian social consciousness. Later on, prestige symbols were used in the large investigation for the sample of selected occupations. They cor-

relate highly with the complexity of work as well as with the general status, life-style and education, and even income. Thus prestige is becoming an objective compensation for the complexity of work and for educational requirements, and, as a derived component (attribute) of the general status, obviously suits occupation and education better than income compensation or participation in management do.

The only aspect of the behavior of people perceived so far, that is, the sociopreferential orientation in associations with friends, has been assessed by M. Petrusek (1969). Here we would only like to mention that the number of associations among people in the same social stratum found in our investigation was greater than was expected and represents another subjective manifestation of the existing stratification.

Thus, the stratification of Czechoslovak society in 1967 was subjectively more clear-cut at all levels observed than had been expected.

PRELIMINARY INTERPRETATION IN TERMS OF RELATION TO TYPES OF SOCIAL STRATIFICATION

Taking all our analyses and considerations[8] into account, we shall now try to advance several general judgments with regard to the relation of actual social stratification found in Czechoslovakia in 1967 and to the "ideal types" of social stratification. We attempted to construct them in a theoretical study, which is part of our book, too.

a) First we can state that social differentiation in Czechoslovakia in 1967 was pronouncedly noncapitalist. On the basis of the monopoly of state and cooperative ownership of production means, we did not find anywhere any significant differentiating role by forms of ownership of means of production, and still smaller was the significance of private ownership, for which we found very few respondents anyway. In almost all spheres we found positively a far smaller social span than is typical for capitalist societies; there was not a trace anywhere of any extreme sharpness in the relations between the upper and lower strata. Social differentiation was of a pronouncedly "gradual" character. No significant residues of privileged positions of former private owners or their children were found

b) Moreover, the Czechoslovak society in 1967 was not even a society of the "worker" type. Although it achieved in many respects a higher degree of social equality for workmen, former workmen, and their children than is typical for capitalist societies, we did not find any substantial residues of ascriptive dominance of the working class, of people with former blue-collar occupations or of working class origin. Only a part of the workmen benefited from the incongruency between education, complexity of work and income; and only a small group of these utilized this advantage for the realization of style of life of the "upper strata."

c) Our findings suggest further that it was the bureaucratic type of

[8] I.e., not only those we could briefly mention in this article and even not only those based merely on the data of our research. Some of our conclusions take into account other data and observations.

organization that was playing a significant role in Czechoslovak society. This was an obvious contradiction to the abolition of distinct inequalities in all the other spheres. But, the empirical data of our study disprove the theory that differentiation in power is dominant in all or nearly all socialist countries at present, no matter if they are theories glorifying this phenomenon in terms of romantic justification of "revolutionary violence" or criticizing it in terms of no less romantic ideas about absolute possibilities of self-government. Without underrating the significance and weight of the political-power sphere, as some apologists of bureaucracy do, we must respect the facts that prove that in Czechoslovakia in 1967 this sphere represented a kind of an external form, partly adapting itself to and partly hindering the development of a different type of social differentiation rather than an "axis" or a basic framework of social stratification and of social life in general. There is hardly any validity to the theory of "a new class" representing a power elite with all the attributes of the upper stratum in the period studied, even though the investigation could not, naturally, perceive its possible narrowest nucleus. However, the study proved sufficiently that around this nucleus—if it existed at all—there was not a large group of people who had privileges without the necessary education and skills.

d) Our study proved once again that it was the relations of the egalitarian type that had great weight in the social arrangment in Czechoslovakia. This was proved especially with regard to the differentiation in the standard of living: first, in terms of a narrower range of incomes in contrast to other countries and the past periods in the development of this country; second, by the fact that the differences in the standard of living did not correspond to those in education, complexity of work, and the cultural level of activities during leisure. It was found, however, that this discordance existed only in a part of the population while congruency prevailed in general. The revealed egalitarian phenomena are, besides the group income incongruency and especially the political influences, mainly an outcome of the general inadequate industrial development and the insufficient increase of the national income.

Further, it was shown that the structure of education corresponded roughly to that of occupational roles and that the formal education was not—as had been assumed before—an additional equalizing factor reducing the range of complexity of work. We do not want to exclude the possibility that this might be the case in partial spheres of society—for example, we know that a part of managers in industry have not attained a sufficient degree of education. We could not sufficiently perceive the problem of the quantitative equalization of education connected with the inflation of graduates in some branches and especially of graduates of extramural and various short-term studies destined to help people in leading positions improve their education.

Finally, it was shown that the income equalization, especially in income per capita, was far from leading to corresponding standardization of consumption or of cultural activities during leisure. In brief, the egalitarian

arrangement was not such a significant aspect of the social structure of Czechoslovakia as we had assumed initially; and this was perhaps one of the most interesting findings of our study.

e) But the technocratic ("culturocratic" or "meritocratic") type of arrangement proved to be rather significant, contrary to our expectations. If in a regime with some bureaucratic traits, tendencies prevail that appreciate qualification and efficiency of the governing elements—and this was, at least formally, the case in Czechoslovakia in 1967 to a great extent—then a restructuring of the governing bureaucratic elite into a technocratic or culturocratic elite might occur with many possible intermediate forms between these two (e.g., "cultural bureaucracy"). With the reservation that we did not discern the highest nucleus of the managing elite and that there are some contradictory phenomena mentioned under (*d*), we can say that we met with strong manifestations of this phenomenon within the sphere of management. A significant part of those in power were qualified people ("experts"), and, at the same time, they possessed other attributes of corresponding social status.

f) The unexpectedly high amount of correspondence between occupation, cultural character of activities during leisure, and education; the role of these differences (comprising also those between manual and nonmanual workers as a partial aspect) as obvious determinants of the framework of social stratification and its more or less adequate subjective manifestation; all this together with the relative equality in most spheres we assess as obvious predominance of the socialist type of social stratification in the most important spheres of social life.[9] This type of stratification affected only partly the spheres of distribution and of the political and organizational system where it operated, for the most part, in a limited technocratic form. Moreover, it was interwoven with significant inequalities resulting from an inadequate industrial maturity of primary culture (rural-urban, industry-agriculture, Bohemia-Slovakia, economically active-non-active, women-men) that deepened and sharpened the span and tension corresponding to the socialist type of stratification.

Nevertheless, the predominance of the achievement and qualification principles in both occupation and leisure was relatively significant in Czechoslovakia in 1967. Although this predominance, based on state and cooperative ownership and primary culture, was rather limited, it did approach the industrial stage. More than a possibility stood out that a modern socialist arrangement on an industrial and cultural basis might prevail. And it was quite clear that socialism, not taken from catechism but put into practice and limited by and intermingled with all possible residues and accompanying features of its genesis, was not a rosy empire of friendship and equality where industrious and diligent people worked willingly and according to their abilities without any outer stimuli and where they

[9] It goes to our concept of mature socialism explained in the theoretical part of our book. We think of socialism as a type of noncapitalist industrial society based on collective ownership of means of production, applying largely the principle of achievement, democratic both in content and form.

were sustained uniformly in terms of slightly differentiated state allocations. A realistic form of socialism began to arise in our country as a noncapitalist (i.e., after abolishing the capitalist form of inequality) variant of an industrial society, based on achievement and stratified and consequently differentiated also in interests and views.

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Religious Participation and the Urban-Suburban Continuum[1]

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In this paper, I review the discussion of the influence of the urban milieu on religious practices and attempt to show that the next step should be a reevaluation of this influence in the light of the social nature of the suburbs. The evidence, based on a census of Catholic mass attenders in Montreal, indicates that level of church attendance increases as people move from the central areas of the city to the periphery. This phenomenon is examined as an effect of the need for community identification and integration, both of which are emphasized in suburban communities. This proposition is verified when we control for the different population compositions of urban and suburban areas. Moreover, it is shown that the higher rate of church attendance in the suburbs represents mainly nominal religious participation (attendance at mass only) with the result that the proportion of churchgoers who engage in devotional religious practices (taking communion, etc.) is lower in the suburban areas.

Now, more than fifteen years since Nuesse (1951, p. 228) remarked that "no attempts have been made to study the ecological distribution of religious practices in American communities," there is still very little research in this field. To be sure, the difficulties in gathering data about religious behavior on an ecological basis are largely responsible. But the problem rests more squarely in the failure to find a sound basis for comparison and to determine precisely the distribution of the population expected to attend church. This difficulty is plainly obvious in the European religious survey where all the persons of a city attending mass on a given Sunday have been enumerated, making possible an examination of the ecological distribution of this population. Another barrier has been the failure to ask the relevant theoretical and empirical questions.

Whenever researchers have tried to study religious practices in urban communities, they have been immediately struck by the reduction of such practices (Boulard 1950, 1960; Folliet 1953; Chélini 1955). In all countries of the occidental world, urbanization has appeared as a negative influence on religious behavior. The impact of urbanization on religious institutions is such that the National Council of Churches found that in the United States "the percent of urbanization of a county was the most important statistic to analyze in connection with the churches located in that county and their membership" (cited by Landis 1959, p. 342). The main reason,

[1] The author wishes to thank Paul M. Siegel, Gerald Suttles, and Morris Janowitz for their criticism and advice, and Mrs. Florence Levinsohn for her editorial assistance. The support of Robert W. Hodge was essential to this analysis and is gratefully acknowledged.

then, for relating religious participation and urbanization is to study the depressive effect of the latter on the former. The rationale of this effect rests on the conception of the urban milieu as one where man becomes an atomistic entity; the breakdown of the "community" yields, in turn, the breakdown of religious institutions.

Lambert (1960, p. 153) asserts that "among the far-reaching changes is the decline in importance of such older centers of loyalty as geographic locale and ethnic affiliation which were the rocks upon which the churches were built in America. The rigid boundaries formed by these differences nurtured denominational separateness and provided the churches with clienteles already defined." The assumption underlying this argument can be formulated in the vocabulary of human ecology. In the passage from the rural community to the urban milieu, the church is transformed from a "basic" institution to a "serving" institution, that is, from an institution which "determines the nature of the community in which it is situated" to an institution which, in order to survive, must find more and more ways to serve its clientele.[2] A few authors have discussed this transformation of the religious institution in an ecological framework, but the goal of these discussions is not to find the ecological distribution of religious practices but to explain the impact of urbanization. In reviewing the French and Americans involved in this discussion, we found that each one culminated logically in a description of a model of ecological distribution of religious practices and that the model described happened to be the same for each group.

FRENCH STUDIES

The works of Jean Labbens (1955, 1958) are a good example of the French approach. His principal idea is that urbanization means migration and that migration makes the urban citizen unstable, lacking the roots in a community by which religion is cultivated as an expression of the community itself.

The extremism of such a definition of the urban dweller is obvious, but we are only interested in the consequences of this definition for the religious institution. According to Labbens, the urban citizen, in his constant mobility, comes to define a precise spatial territory as "his world." At the same time, the ecological division of functions in the city yields some areas which come to be specialized for religious institutions. In due course, persons who include religious institutions in their spatially defined "urban world" show a greater propensity to attend church than those who never confront the religious life of the city (Labbens 1958, pp. 52 ff.).

This thesis is not supported by empirical findings. Labbens (1955, p. 62) himself recognized that concentration of a large part of the religious activities of a city in a few and well-defined areas has been largely overestimated as far as Catholic cities are concerned. Labbens's contentions, however,

[2] The distinction between "basic" and "serving" institutions comes from E. C. Hughes (1936).

are not all false. The urban dweller is indeed less prone than his rural counterpart to map "his world" around a precise church. In fact, the city implies a new component of church observance: a choice of which church to attend. Fosselman (1951, p. 150) has shown that the urban parish in the United States covers a territory five times larger than the rural parish. It is quite frequent for a parishioner to attend church in the next parish because the latter church is nearer than the one of his own parish.[3] In this sense, the urban parish is a less-precise element of the "world" of a person than it is in a rural milieu. But we cannot infer from this a principle of concentration of religious practice in specialized "religious" areas in a city. Labbens himself has set aside this ecological principle of church attendance. Instead, his survey in Lyon leads him to conclude: "It seems that there is some overlapping of the areas where people attend mass and the areas where it looks good to live" (Labbens 1955, p. 60, our translation). Gros (1954, pp. 52–53) reaches the same conclusion in a more explicit way in the case of Marseille. The problem with such a conclusion is its failure to distinguish between the ecological influence (in terms of the relative position of each neighborhood in the city) and the influence of the population composition.

AMERICAN STUDIES

The "American" approach also fails to discover a true ecological influence on the distribution of religious practices. Harlan Paul Douglass is the best representative of the American approach to the relationship between urbanization and religion. For him, the specialization of functions on which the urban organization rests applies to the church as well as to other institutions. The main characteristic of the urban church, as compared to the rural church, is its necessary drive for efficient services.[4] This conception rests on the principle that urban civilization is "the triumph of accessibility over proximity."

Douglass argues, on the basis of a survey of 1,000 urban churches, that it is impossible to observe a clear relationship between the adaptation of the church and its immediate environment. He (1926, p. 262) says: "In other words, the attempt to classify city churches generally on the basis of their immediate environment proceeds from what is really the holdover of a rural idea. It takes a criterion applicable to a simple society and tries to apply it to a complex urban situation."

However, a few years later, a study designed by the Institute of Social and Religious Research to probe the relationship between the progress

[3] L. Gros (1954, p. 92) estimates that 28 percent of the people attending church are not attending in their own parish. A similar estimate (30 percent) is made by E. Pin (1956, p. 84) on the basis of one parish. The census of religious attendance in Montreal to which we will refer later in this paper shows that 25 percent of the people attending mass go to a parish other than their own.

[4] This conception is supported by the fact that urban churches sponsor and manage more auxiliary activities and services than rural churches (Douglass and Brunner 1935, p. 137).

of urban churches and the trends of change in their environment concluded: "In neighborhoods in which it is most desirable to live, from the standpoint of such items as convenient transportation, health, congenial neighbors, and comfortable housing, churches automatically make progress that can be quantitatively measured; while in neighborhoods in which it is unpleasant to live, churches automatically lose ground" (Sanderson 1932, p. 435). This quotation closely resembles the conclusions reached by Labbens after a study of the distribution of church attendance in Lyon. But American authors have added another dimension to the discussion: the phenomenon of urban mobility. As early as 1927, A. E. Holt (1927, p. 74) remarked that "in county-seat towns and residential suburbs churches . . . always make a good showing" because they have the population shift with them. Later, Douglass (1929, p. 2) began "a study of cooperative church extension in American cities" by stating that symbiosis occurs between a church and the status of the surrounding community, so that any deterioration of the standard of living of the community is a serious threat to the church.

The general conclusion that local religious institutions reflect the nature of their environment, even in the urban milieu, is thus found in the American studies. The problem is that these institutions are no longer the main determinants of the distribution of diverse populations; in fact, this distribution often threatens their very survival (Martin 1941). This threat has been so effective that the churches have been forced to migrate with their constituency in order to survive.

G. Winter (1961, pp. 39 ff.) has described this "exodus" for the Protestant churches and its consequences. Yet, although it has been the tendency of the Protestant churches to desert the city and become suburban "captives," some churches have stayed behind in the city for financial as well as philosophical reasons. The next logical step seems to be the development of a typology of these churches according to their location in the metropolitan area. S. C. Kincheloe (1938) has established such a typology with the dominant types corresponding to the concentric zones of the city growth defined by Burgess (1926). (1) The downtown parish appeals to a scattered constituency and survives through the development of specific specialties. (2) The church in the transition area of the city must adapt its style to the population in its vicinity and is a middle type between the downtown and suburban churches as far as its communal character is concerned. (3) In the suburban areas, the church is highly communal and much less specialized (Kincheloe 1938, pp. 96 ff.). A simple typology has been designed to describe the distribution in the city of the constituency of the church. The "metropolitan" church attracts people from all over the urban area while the "neighborhood" church is limited to certain geographic boundaries (Queen and Carpenter 1953, pp. 291–92).[5]

The last two studies represent attempts to synthesize the two approaches encountered in the review of the literature on ecology and religion.

[5] For a good description of the institutional characteristics of the downtown and neighborhood churches, see W. Kloetzli (1961).

1. Urbanization means the breakdown of the "communal" type of human grouping. This principle, which was predominant in the first discussions of urban religion, appears in a milder form in the typologies of churches. The last two studies recognize, in the more stable areas of the new metropolis, the possibility of a new "communalism."

2. The characteristics of the population in the neighborhood of the church determine the type of religious life to be found there. Since a great number of churches have followed their congregations to the suburbs instead of trying to attact new members from various points in the metropolitan area, they are linked to the needs of these populations and share their characteristics.

Two questions remain unanswered, however. First, is there a suburban religious life that can be contrasted to the urban? In their migration to the suburbs have people and churches really discovered a new way to relate to each other? In other words, we want to test the latent hypothesis of the typologies of churches concerning the new "communalism," and if this hypothesis seems verified we will try to give content to the concept of "communalism." The second question is as important as the first one because it reverses the interaction of population composition and ecology. Are the suburban churches different from the urban churches only because they correspond to different populations? Both in the French and American studies to which we have referred, the differences in religious life of various areas in the city are related to the nature of the population of these areas If this is the only relationship possible, we cannot speak of a true ecological distribution of religious practices and must turn our attention to the explanation of differentials at the individual level. Many authors have already dealt with these kinds of questions, but so far nobody has tried to distinguish a distinct ecological influence on religious practices independent of the differentials accounted for by individual characteristics.[6]

SUBURBAN WAY OF LIFE

Traditional theories about urbanization postulate that the urban way of life rests on secondary relationships which constitute "political communities" (in Weber's terms) or "associationalist societies" (in MacIver's terms).[7] A more recent line of reasoning has discovered that the suburb

[6] Two incomplete attempts by Greer and Kube (1959) and Zimmer and Hawley (1959), which will be discussed below, have been made to study the ecology of religious practice while controlling some elements of population composition. The studies of the individual characteristics affecting religious participation are too numerous to be listed here. For a good synthesis of the French studies, see J. Maître (1957). M. Argyle's book, *Religious Behavior* (1959) is a very interesting treatise. We may mention G. Lenski (1953), B. Lazerwitz (1961), and J. D. Cowhig and L. F. Schnore (1962).

[7] For a good discussion of the concept of community, see R. M. MacIver (1928). MacIver distinguishes two levels of community, each level resting on a set of common interests of their members. The higher level deals with interests concerning the human aggregate as well as each individual member. The lower level, the quasi community, deals with interests primarily referring to the individual members. We use the concept

tends to rehabilitate the notion of community in a cultural rather than political sense. As far as the urban-suburban dichotomy is concerned, two conclusions have been reached on the basis of the reexamination of urban theory. The first one states: "If urban and suburban areas are similar in that the way of life in both is quasi-primary, and if urban residents who move out to the suburbs do not undergo any significant changes in behavior, it would be fair to argue that the differences in ways of life between the two types of settlements have been overestimated" (Gans 1968, p. 71). The second conclusion recognizes an appreciable amount of difference between the two types of settlements.[8] In our view, neither contention excludes the other one. Both urban and suburban areas may have a quasi-primary way of life and still have differences in this way of life. The urban way of life may be quasi-primary because people cultivate face-to-face relationships on the basis of personal choice. The suburban way of life may be quasi-primary because suburbanites are gathered together for face-to-face relationships by their common interest in the nature and development of their neighborhood.[9] It is a truism nowadays to note the integrative role of religion for human groups. If the church does indeed play such a role, the suburban church should be used as a channel to assert the identity of the neighborhood, while such a process should be less important for the urban church. With this assumption, we can expect the importance of church attendance and participation to increase as we go from the most "urban" areas to the most "suburban," and this relationship should be independent of the population composition.

Only two empirical studies contain the material needed to support our thesis. One by Greer and Kube (1959, p. 103) shows that the level of church attendance increases as we go from the more to the less urban areas. It is doubtful, of course, that the four areas of Los Angeles studied by Greer and Kube represent the whole range of urbanization levels. Also, the test is performed at only a single level of the socioeconomic continuum and, in addition, population composition is left uncontrolled. Zimmer and Hawley (1959), on the contrary, have found that church participation decreases with suburbanization, while controlling for relevant characteristics of population. This study remains equivocal because, while referring to suburbanization in the title of the article, the authors actually compare central city and fringe. In yet other publications based on the same material, the comparison consists of central city and a satellite area (Hawley and Zimmer 1961). Unfortunately, it is impossible, using the details given

of community at the higher level of expression. For Weber's definition of "political communities," see *The City* (1962, pp. 182 ff. and passim). "Associationalist societies" are defined by MacIver in his *The Web of Government* (1947).

8 Greer (1962) is a strong partisan of this interpretation.

9 This implies that the identification with the interests of a neighborhood represents a type of identification different from the one provided by formal organizations without any territorial basis. In the latter case, the interests of the individual are separable from the collective interests; in the former case, they are not. Evidence of this distinction may be found in Greer and Kube (1959).

by Hawley and Zimmer, to equate their "satellite area" with what Kurtz and Eicher (1958) call "fringe or suburb." Nonetheless, like most fringe areas, Hawley and Zimmer's satellite area exemplifies a lower socioeconomic status than the central city. Thus, since all we can say is that the fringe is expected to exhibit less "consistent identification and integration" (Kurtz and Eicher 1958, p. 37) than the suburb, it is quite difficult to relate Hawley and Zimmer's comparison of central city and fringe to the comparison of central city and suburb implied by our hypothesis.

DATA AND HYPOTHESES

The data we will refer to in the following pages come from a census of the church attenders in the metropolitan area of Montreal. All the people attending Catholic services in the churches of Montreal on the third Sunday of October 1961 were asked to fill out a questionnaire.[10] Since this religious census occurred four months after the Canadian Census of 1961, and since it was possible to obtain from the Bureau of the Census the distribution of sex, age, ethnic origin, occupation, and education of the Catholic population of each census tract, the value of the religious census was greatly enhanced. With the knowledge of the precise place of residence in the city, it was possible to coordinate the population of church attenders with the census tracts. Knowing the total population, the number of Catholics, of mass attenders, and of communicants we can define three religious indices for each census tract: the percentage of Catholics, of mass attenders, and of communicants.

The last variable is seldom used in studies of religious participation When it is, its meaning, as distinguished from church attendance, is often not made clear.[11] In our perspective, communion represents what Argyle (1968, p. 422) calls "private religious activity" as opposed to "public religious activity." The former may be thought of as devotional, while the latter may be considered "cultic."[12]

To characterize the census tracts with reference to ecology and urbanization, we will use a single simple index: the distance of the tract from the

[10] The questionnaires were distributed at the doors of all Catholic churches in the metropolitan area. A fixed period of time during the service was reserved to fill them out. At the end of this period all the questionnaires were collected. This method was designed in France by J. Petit and is described in J. Labbens (1954). In Montreal, less than 2 percent of the questionnaires were not returned. More than 96 percent of the persons enumerated answered all the questions.

[11] An example of this lack of distinction between the two activities can be found in J. H. Fichter (1951, p. 21). Fichter says: "*In each aspect of religious behavior which we studied,* the Catholic Church presents a recognizable ideal. The complete acceptance of all these ideals is sanctity. Variations from the ideal may be roughly categorized and placed on a *scale* so that a *general view of the parish's success or failure* in its primary functions may be obtained."

[12] The introduction of dimensions of religiosity is due to Charles Y. Glock (1959). An interesting application of this dimensional approach may be found in Y. Fukuyama (1961).

center of the metropolitan area. The geography and the historical growth of Montreal allow for a strict interpretation of this index in terms of the successive stages of urbanization.[13] To control for population composition, we will analyze sex, age, occupation, education, and ethnic composition.[14] To be sure these characteristics do not constitute an exhaustive list of the relevant variables of population composition, but the literature on the determinants of religious behavior generally shows them to be the most important.

With this material we can test two hypotheses related to our previous discussion: (1) The two indices of religious participation (mass attendance and communion) should be related to the level of urbanization independent of the population composition. (2) "Cultic" (mass attendance) and devotional (communion) religious activities relate differently to urbanization, since they have different meaning as far as the communal way of life is concerned.

The percentage of Catholics—which represents religious affiliation rather than religious participation—is relevant to our discussion only in a descriptive sense. We will not use this index in our hypotheses, but it will serve to describe the overall religious context of Montreal, one of overwhelmingly strong homogeneity in church affiliation.

RESULTS

The first results obtained from the data are the mean values of the three religious indices according to the distances of the census tracts from the center of the metropolitan area It is clear when the data are presented in this format (table 1) that there is considerable variation for each religious variable between the zones. The percentage of Catholics goes from 88 to 68, a difference of 20 percentage points. The difference amounts to 31 points for mass attendance and to 9 points for communion. Relative to the the grand means, these differences represent 25 percent of all Catholics, 57 percent of the percentage of mass attendance, and 33 percent of the percentage of communion. Concerning the direction of the variation, we face three different situations. Up to three miles from the center of the area, the percentage of Catholics is clearly above the mean for the whole metropolitan area. All the zones more than three miles from the center show a percentage below the metropolitan average, except for zone 11. The Catholics are then concentrated around the center of the area, and, as we go to the outer limits, their relative importance in the population decreases. We get a different phenomenon for the level of mass attendance: the first four zones have a percentage of mass attenders lower than the

[13] For a good description of the ecological structure of the metropolitan area of Montreal, see N. Lacoste (1958).

[14] Definition of the variables of population composition to be used: age = percentage less than twenty-five years old; sex = sex ratio; ethnic origin = percentage of French origin; occupation = percentage of blue-collar workers; education = percentage with grade school education.

grand mean, while the percentage rises above the general average for the zones more than two miles from the center.

Communion tends to produce a U-shaped relationship with distance. The percentage of communion goes down as we move further away from the center. When we arrive at a certain point (zones 9 or 10), however, it seems to reverse its trajectory and to increase again. Before trying to explain this fact, let us look at a more precise measure of the covariability of ecological distance and religious variables.

TABLE 1

MEAN VALUE OF THE RELIGIOUS VARIABLES FOR EACH SUCCESSIVE CONCENTRIC ZONE AROUND THE CENTER OF THE METROPOLITAN AREA OF MONTREAL

Distance in Miles	Number of Census Tracts	Mean Percentage of Catholics*	Mean Percentage of Mass Attendance†	Mean Percentage of Communion‡
0 00– 0.49	10	82	33	33
0.50– 0.99	22	84	39	30
1.00– 1 49	26	83	45	29
1.50– 1 99	34	88	50	26
2.00– 2 49	33	81	56	29
2.50– 2.99	35	84	56	24
3.00– 3 49	47	77	55	26
3 50– 3.99	40	73	57	26
4.00– 4.99	30	72	56	28
5 00– 5.99	23	75	62	29
6.00– 7 99	27	84	59	26
8.00–11 99	17	78	64	29
12.00–17.99	16	72	64	30
18 00–24.60	9	68	59	26
Metropolitan area	369	79	54	27

* Computed on the basis of the total civil population.
† Computed on the basis of the number of Catholics.
‡ Computed on the basis of the number of mass attenders.

The erratic pattern of variation in communion level may be due to an overall random variation when dealing with each census tract instead of the aggregates represented by the zones. Table 2 shows the correlation coefficients between distance and the religious variables. These coefficients verify the positive effect of distance from the center of the city on mass attendance and its negative effect on the percentage of Catholics, while they show that there is no relationship between distance and communion. This table also shows that a logarithmic transformation of distance yields higher correlations between distance and the religious variables. This is quite understandable, since the zones get wider and wider as we go further away from the center. In the following pages we will use the logarithmic transformation of distance in statistical analysis.

For more precision, we have considered the possibility of a parabolic

relationship between distance and the religious variables. As can be seen from the third column of table 2, the logarithmic transformation yields a greater zero-order correlation coefficient than the multiple correlation coefficient obtained from the second-order regression equation. We can be confident, then, that the relationships under study do not tend to take a parabolic form within the relevant distance range.

A second goal of this analysis is to clearly disentangle pure ecological influence from the influence of population composition. Each religious element in our analysis is influenced by individual characteristics, as can be seen from table 3. Females have a higher rate of mass attendance and communion than males. The percentages of Catholics and of mass attenders decrease with increasing age, while the percentage of communicants follows a U-shaped curve from the younger to the older groups. The differentials of Catholicity, mass attendance, and communion are quite discernible for

TABLE 2

CORRELATION COEFFICIENTS BETWEEN ECOLOGICAL DISTANCE AND THE RELIGIOUS VARIABLES ($N = 369$)

	Ecological Distance	Ecological Distance, Logarithmic Transformation	Ecological Distance, Parabolic Equation[a]
Catholics (%) . . .	− 133*	− 142*	138
Mass attendance (%) . . .	339*	495*	464*
Communion (%) . . .	012	− .076	044

[a] Multiple correlation coefficients using ecological distance and its square as independent variables.

* Coefficient significant at the 01 level.

ethnic groups. Lower occupational and educational categories have a higher percentage of Catholics and smaller rates of church attendance and communion than higher-status categories. All these differentials can be expected to influence the level of religious activity of the various census tracts through the variables of population composition. Since, for this analysis, the variables of population composition are defined for the total population, and since these variables represent aggregates of more than one category, we will note a certain distortion of the "ecological" correlations compared with individual relationships. Nonetheless, it is important to ascertain the impact of the population composition on the religious variables before going any further.

Table 4 shows that the Catholics are concentrated in areas of younger population, and their importance is proportional to the importance of the French-Canadian group. Moreover, the presence of Catholics coincides with areas of lower social status. Since we find people who are younger and of higher social status as we go from the center to the outer limits of the metropolitan area, a certain pattern of intercorrelation of the variables

TABLE 3

PERCENTAGE OF CATHOLICS, MASS ATTENDANCE, AND COMMUNION BY SEX, AGE, ETHNIC ORIGIN, OCCUPATION, AND EDUCATION

	Catholics (%)	Mass Attendance (%)	Communion (%)
Sex:			
Male	78	55	22
Female	78	61	31
Age:			
7–9	81	(61)*	39
10–14	79	79	37
15–19	81	74	22
20–24	81	54	16
25–34	79	48	17
35–44	76	53	20
45–54	74	57	27
55–64	73	58	34
65–69	72	54	41
70 and up	67	48	50
Ethnic origin:			
British	34	55	27
French	98	53	27
Italian	97	28	18
Other	32	30	19
Occupation:			
Managers	57	62	15
Professional	66	69	41
Sales	71	62	19
Clerical	72	71	15
Services	79	34	15
Transportation	86	38	12
Craftsmen	84	40	13
Laborers	93	48	13
Education:			
Elementary school	83	57	15
High school	66	56	22
University	55	87	31
Total population	78	58	27

* This percentage represents a definite undercount clearly shown by a thorough analysis of "no answers" to the age question of nonusable questionnaires and of "failures to return a questionnaire" at the time of the "census." We have not corrected this figure for this paper.

TABLE 4

CORRELATION COEFFICIENTS BETWEEN THE VARIABLES OF POPULATION COMPOSITION AND THE RELIGIOUS VARIABLES, AND ECOLOGICAL DISTANCE ($N = 369$)

INDEPENDENT VARIABLES	DEPENDENT VARIABLES: Catholics (%)	Mass Attendance (%)	Communion (%)	ECOLOGICAL DISTANCE
Sex ratio	.098	−.201*	079	.015
Less than 25 years old (%)	247*	024	−.008	.299*
French (%)	942*	.252*	− 091	−.100
Blue collar (%)	.751*	−.166*	−.585*	−.281*
Grade school (%)	.781*	−.267*	−.406*	− 143*

* Coefficient significant at the .01 level

may arise. This pattern seems contradictory, since these two characteristics (age and social status) of the population of the suburbs are inversely related to the concentration of Catholics. One possible outcome would be the disappearance of the relationship between the percentage of Catholics and ecological distance.

The distribution of mass attenders is proportional to the distribution of high-status groups and of French-Canadians; also, mass attenders are concentrated in areas where the feminine population is overrepresented. The only possibility of intercorrelation in this case derives from the distribution of status groups; where the status is higher, we find a greater rate of mass attendance, and the status is higher in the areas further away from the center of the city. It is thus possible that the relationship between ecological distance and mass attendance is a reflection of the higher status of suburban areas.

The same kind of reasoning may be true for the influence of population composition on communion. A relationship between distance and the percentage of communion could be explained through the higher status of the populations far from the center of the metropolitan area. But, as we have seen, such a relationship does not exist where no controls for the composition of the population are introduced. So far, then, we have learned: distance and mass attendance may be spuriously correlated; the percentage of Catholics could be expected to be independent of the distance, but it is not; a zero-order spurious correlation between distance and the level of communion would be plausible, but there is no significant relationship between these two variables. We will try to find an explanation for these phenomena through the regression of the religious variables on both the population composition and the ecological distance.

From the information contained in table 5, we can compute the difference between two areas with the same population composition, one in the first concentric zone around the center of the metropolis, the other at the greatest distance from this point. Controlling for population composition, there is a difference of 1.80 percent in the percentage of Catholics in the suburbs; the percentage of mass attendance increases by 28.99 percent; and the percentage of communion decreases by 9.23 percent. When the population composition is not accounted for, the difference on the first variable is more than ten times larger, while the differences on the last two variables are almost the same as where control is introduced. The variation in the percentage of Catholics is in no way related to the ecological position of the area when we take into account the kind of population constituting it. The main influence comes from the ethnic composition (two-thirds of the variance explained by the regression equation is directly due to the percentage of French origin). When we consider the distribution of mass attenders, we find an ecological influence independent of the population composition. A partitioning of the variance explained by the regression equation reveals that some 46 percent of it is directly due to the variables of population composition, 41 percent is due to the direct influence of

ecological distance, and 13 percent comes from the joint action of these two types of variables.[15]

The population composition effect is due mainly to the ethnic variable. This phenomenon is probably the combination of a "majority influence" and an ethnic differential of propensity to attend church. The "majority influence" is the fact that the more ethnically homogeneous an area, the easier the identification process and the higher the proportion of people who express this identification by attending church. But we must not forget that the other predominantly Catholic ethnic groups (especially the Italians) have a lower rate of church attendance than the French Catholics. It is impossible, on the basis of our data, to disentangle and evaluate the

TABLE 5

REGRESSION OF THE RELIGIOUS VARIABLES ON POPULATION COMPOSITION VARIABLES AND ECOLOGICAL DISTANCE: STANDARDIZED β COEFFICIENTS AND MULTIPLE CORRELATION COEFFICIENTS ($N = 369$)

Independent Variables	Catholics (%)	Mass Attendance (%)	Communion (%)
Sex ratio	0 1214*	−0 2982*	−0.2044*
7-24 years old (%)	−0 1173*	0 0815	0 3977*
French (%)	0 7862*	0 5353*	0 2237*
Blue collar (%)	0 2115*	−0 2723	0 3220
Grade school (%)	0 0563	−0 1853	−1 1472*
Ecological distance	0.0156	0 4259*	−0 2425*
Multiple correlation	0 961*	0 669*	0.664*

* Coefficients significant at the 01 level

importance of these two interpretations. To sum up, then, the influence of ecological position is not a reflection of the higher social status of the suburban populations.

The rate of communion is more complex. The zero-order correlation coefficient between communion and ecological distance is not significant, but the partial coefficient ($r = -.242$) is significant when controlling for population composition. This result is understandable when we look at the variables of social status. While occupation and education go in the same direction when we do not control for ecological distance, they tend to move in the opposite direction in the controlled situation. At a given level of suburbanization, the lower the social status of the population in terms of occupation, the higher the level of communion. When social status is measured by education, the relationship is the reverse. To be more precise, we must add that, while the partial coefficient of correlation is significant in the latter case ($r = -.374$), it is not in the former ($r = .108$). One interpretation would suggest that education is a much stronger

[15] This partitioning of the variance follows the model which can be found in C. F. Werts (1968).

determinant of religious habits than is occupation, at the individual level. The observed significant influence of education then could be attributed to individual characteristics. But at the collective level, the influence of occupational composition is replaced by the ecological influence when the two variables enter a same regression equation. For a given occupational composition, collectivities in the suburban areas have a lower percentage of communion than in the urban areas. In a given section of the metropolitan area, the differential in occupational composition does not influence the rate of communion.

So far, the material eloquently supports my two formal hypotheses. Mass attendance is consistently higher in the suburbs and communion is significantly lower, these relationships being free of population composition effects. Moreover, the analysis of the results has brought out two additional facts. First, the concentration of the French population in any part of the metropolis influences positively the level of church attendance. Second, when the level of suburbanization is kept constant, the rate of communion is independent of the occupational composition of the area. I will now suggest a unified interpretation of the hypotheses verified in the context of the theoretical sequence involving suburbanization, religious institution, and community.

INTERPRETATION

Discussing the structuring of social relationships in suburban areas, W. T. Martin (1956, p. 452) writes: "An important derivative characteristic of suburban population is the configuration of attitudes, interests, and values which favors a high rate of both informal interaction and formal participation This social psychological aspect of the suburban population appears to be an important factor in developing patterns of social relationships in suburbs which differ from those found in the equally homogeneous, middle-class populations of some urban sub-areas." In this paper I have tested the existence of this suburban peculiarity, but there is more to it than a "social psychological aspect of the suburban population." In other words, the "configuration of attitudes, interests, and values" must be defined more clearly. What is the basis for this suburban peculiarity?

I have suggested a distinction between the quasi-primary urban and suburban ways of life, the latter implying the existence of a territorially based collectivity with interests shared by all its members. The rationale underlying such a social arrangement may be broken down into several components First, the suburban type of settlement yields a more homogeneous economic setting. Moreover, this economic homogeneity is paralleled by another homogeneity, namely, that the aspirations and the needs of the people are expressed in familistic terms. It is quite natural to expect that such a collectivity will pay less attention to the usual criteria for social distinctions. Consequently, the need for an internal system of distinctions may be replaced by an external one. In this process of identification and integration we suggest that the church plays a dominant role.

There is more in the religious institution's function than the traditiona thesis of the correspondence of institution to the population served.[16] No only does the church try to adapt its style to its constituency, but, con versely, it is used by the collectivity to assess its identity. The suburba community is not a traditional parish, but it is more like it than an urba parish. In this new version of the community, the ethnic and class homo geneity which were essential to the rural parish (Miner 1939) have bee replaced by homogeneity in the life style (the earlier type of homogeneit may exist, but it is not necessary like the later type). Therefore, two chan nels of communication may be observed between the individual and th social system of the metropolitan area: (1) the social categories (especiall the categories of occupational role and social status) and (2) the territoriall based community. While the urban resident favors the former channel, th suburban resident favors the latter.

Under this thesis, the higher rate of church attendance in the suburbs i interpreted as a manifestation of the need to identify with the suburba community. This line of interpretation coincides with the description o the role of religious affiliation given by W. H. Whyte. He (1957) has show how, in a newly created suburb, the establishment of a religious institu tion corresponds more to the integrative tendency of the community tha to the previous affiliations of its members. A similar process of standardiza tion of religious affiliations of suburbanites is revealed for ninety Chicag suburbs between 1950 and 1960 (Mueller 1966). My interpretation gives new dimension to the fact that, in their exodus to the suburbs, "even th Protestant churches are coming to look upon the exclusive territorial paris as the ideal" (Hughes 1936, p. 186).

It is quite evident that we cannot give the same interpretation to th relationship between ecological distance and communion, since this rela tionship is negative. We may note that this result supports, at the ecologica level, a differentiation of the dimensions of religiosity already verified at th individual level (Demerath 1961, 1965; Dynes 1955; Fukuyama 1961) It is plausible to expect that community identification works through public manifestation like church attendance; the same cannot be said of private manifestation. Thus, at first glance, the index of communion seem to be irrelevant in our discussion of identification in suburbs. But thi index is as useful as the other to add evidence to our general interpretation The rationale for this addition is already implicit in what I said above if the rate of church attendance in suburbs is higher because this activit takes an additional meaning which does not exist in the urban areas, w may contend that the increase in church attendance consists of a group o people who would not be attracted to church under different circumstances This contention is supported by the comments of H. P. Douglass (1924 p. 242) in which he states that a good part of membership of Protestan

[16] Hawley (1941, p. 633) writes: "In this it is assumed that different types of population live in different ways and that the way in which a population lives is reflected in th institutions which serve it."

suburban churches is nominal. Our complete interpretation, then, is that the communal way of life of the suburbs causes a higher level of public religious activity, but at the same time a certain part of this public religious involvement is "nominal" as far as true religiosity is concerned, thus yielding a lower rate of private religious activity.[17]

SUMMARY

We have tried to show that the breakdown of the local community in the urban environment is an important concept in the discussion of ecology and religion when this discussion is centered on the urban-rural typology. When using the urban-suburban dichotomy, the central concept is the resurgence of the communal way of life. Our argument is that the suburban collectivity tends, more than its urban counterpart, to realize a territorially based quasi community. The fact that the communal orientation of the suburbs implies a higher rate of public religious participation and a lower rate of private activities has been verified and explained.

To be sure, this paper constitutes a starting point, to open new avenues of research. For the differences in the mechanisms of identification and integration between the urban and suburban residents will have to be clearly defined. What institutions are to be used as channels between the urban and suburban citizens and the collectivity? What is the nature of this collectivity in each case? At the level of religious studies, the individual approach of religion will have to be paralleled by one of collectivities. Do various religious activities have the same meaning among individuals sharing the same characteristics while living in different types of collectivity? Is religious participation equivalent to the other forms of social participation when the basis for distinction is their respective functions at a collective level rather than the determinants of individual behavior?

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[17] It would be interesting to see this kind of interpretation applied to the thesis about the nature of the religiosity of lower- and higher-class people. Is the more cultic or churchlike religious orientation of the high-status groups a reflection of their need to assess their common status through religious participation? Is the more devotional or sectlike religious orientation of lower-class people traceable to the relative absence of purely nominal religious participation among these groups?

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The Meaning and End of Religiosity[1]

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The conceptual polarity in the sociology of religion—the institutional model of "religiosity" on the one hand and the social-psychological model of "belief" or "faith" on the other—is explored in the relationship between social class and religiosity. A careful empirical examination of this relationship permits a resolution of this polarity by indicating that social class position does not predict religiosity nor does it determine the elements comprising religiosity. Using a national sample of Protestant churchmen, a replication is conducted of Erich Goode's earlier third-item test of the religiosity/social class relationship. The replication fails to substantiate Goode's findings. Using a new third item—the Integration Scale, a variable containing all elements in a member's relationship to a congregation—the relationship between social class and religiosity is again tested. The relationship holds, necessitating the development of a unified theory of social class as the context of meaning for church-linked behaviors. This social class model is then further tested and substantiated with the data at hand The results require the abandonment of "religiosity" as a model of the religious and demonstrate the usefulness of a social-psychological model as the conceptual grounding for the discipline.

INTRODUCTION

It is evident that the "state of the art" in the sociology of religion has become so polarized that scholars whose commitments are to one rather than the other paradigm for the "religious" are cut off from fruitful dialogue with each other. Indeed there appears to be no middle ground between these two positions. As Thomas Luckmann notes (1967, p. 19), scholars who utilize either a Weberian or Durkheimian approach to religious phenomena fail to recognize the points of kinship in the originial formulations of Weber and Durkheim.

This polarity between the Weber and Durkheim traditions may be seen most clearly in the varied discussions of the relationship between social class and religiosity.

At one pole are those who utilize an institutional model (Demerath 1961; Fichter 1954; Glock and Stark 1965; Lenski 1961; Yinger 1957), arguing

[1] This study was made possible in part through the Undergraduate Research Participant Program at Clark University, funded by the National Science Foundation, and through a Shell Assist from the funds made available to Clark University by the Shell Companies Foundation.

that one's role or roles in religious collectivities contain the meaning of the religious. For these, social class is understood as affecting the style of that role performance and, thus, of religious expression. Generally, therefore, middle-class persons are understood to be religious activists, while lower-class persons are understood as religious devotionalists. This also means that, when measures of organizational participation are used as indicators of the religious, persons in the middle class will appear to be more religiously concerned than those of other classes.

At the other pole are those who utilize a psychological model (Berger 1961; Hollingshead 1949; Herberg 1960; Lynd and Lynd 1929; Marty 1959; Schneider and Dornbusch 1958; Winter 1961), asserting that one's commitment to a particular value orientation contains the meaning of the religious. One possibility for such commitment is taken to be society itself, as mediated through one's social class position. Thus one's role in religious collectivities as in other voluntary associations provides opportunity for acting out one's commitment to the values contained and expressed within American society in the form of a social class hierarchy. At the same time, religious traditions are viewed as providing real alternatives for commitment. Therefore, when the relationship between social class and church participation is found, this is taken as an indication of commitment to the common values implicit in American society rather than those implicit in the religious tradition under study.

One of the underlying factors in maintaining this conceptual polarity is the *simple* relationship between religiosity and social class which both paradigms lead one to expect. The difficulty, however, is that while both positions predict such a relationship, the empirical test of the relationship does not permit a resolution of the theoretical polarity. Empirical tests have not been developed which would permit us both to examine the relationship and, simultaneously, to test the adequacy of the conceptual models contained in the polarity. It is critical, then, to devise a test which would permit such a resolution and would, therefore, give some confidence to a tentative judgment between the claims of the two positions.

The critical character of this relationship between social class and religiosity has been clearly recognized by Erich Goode (1966). He argues that "Church activity cannot be seen as an indicator of religiosity if its relationship to other variables is dependent on non-religious factors." This seems to indicate that the empirical test of the polar positions has been thus far obscured by the inadequacy of the character of the indicators of religiosity utilized. His strategy, therefore, is to examine the adequacy of church participation indicators by constructing a three-variable test which enables him to conclude that the relationship between social class and religiosity is an artifact of a third variable which he calls "general associational activity." He interprets this finding to mean that church-linked activities have become "secularized" for the middle class whose members are generally active associationally, while, for the working class whose members are not so active, they remain "more specifically religious in character." For Goode this does not mean that social class variation on

measures of religious activity and involvement describes differing styles of religiousness but, rather, that certain church-linked activities ought not be considered as indicators of the religious at all.

Implicit in Goode's approach is an attempt to evaluate the conceptual adequacy of the polar positions in the field. If he were correct, his conclusions would necessitate a serious questioning of the worth of the institutional model and would suggest that much more emphasis be placed on the development of a psychological or social-psychological model as a theoretical grounding for the discipline. Moreover, for those interested in a resolution of the conceptual polarity in the field, a replication of his work with a more adequate sample is indicated.

The opportunity to conduct such a replication with data of the same quality as those which Goode himself used came when Lauris B. Whitman, lately director of the former Bureau of Research and Survey of the National Council of the Churches of Christ, made available to us questionnaire responses from a national sample of church members, previously collected under the auspices of that Bureau.[2]

THE SAMPLE

While the manner of data collection varied among those denominational offices of research cooperating with the National Council's Bureau of Research and Survey, this national sample of church members from nine Protestant denominations was collected in 1957 from fifty-two churches in twenty-three urban centers across the United States. This sample of 13,088 laymen represents the supportive core of members in these congregations. In its published report of the questionnaire marginals the Bureau (1960, p. iii) describes the sample by suggesting that "many strong clues indicate that the most active church members were the people most likely to respond to the questionnaire. So substantial are these clues, in fact, that an assumption that the findings represent 'active' Protestant church members rather than the 'average' member can be made with assurance."[3]

When this national sample of churchmen is compared with the 1960 National Census figures, a consistent overrepresentation of persons from the middle classes is revealed. Thus, while 6.7 percent of the national

[2] Goode utilized two sets of data, the one gathered among churchmen in the Appalachian region by Earl Brewer and the other among then Congregational Christian churchmen by Yoshio Fukuyama. The latter was part of a larger set of data gathered from a national sample of urban Protestant churches for a study sponsored by the then Bureau of Research and Survey of the National Council of the Churches of Christ in consultation with Charles Y. Glock, at that time director of the Bureau of Applied Research. It is the latter national sample that is used in this present study. To maintain strict methodological compatibility, therefore, the replication is based on Goode's analysis of the Congregational Christian sample.

[3] The active character of the sample can be seen from the facts that 95.7 percent of the sample contribute regularly to at least one church fund; 78.7 percent worship at least twice a month; 60.7 percent belong to at least one church organization; and 34.1 percent hold at least one officership in their congregation.

church sample have only grammar school experience and 55.8 percent have college experience, the census figures are 39.8 percent and 16.5 percent, respectively. Similar disparities are revealed when a comparison is made in occupational and income categories.[4]

This brief description of the national sample of churchmen indicates the middle-class, activist bias of main-line Protestantism. For the purposes of the replication this bias is *not* disadvantageous, however, but should serve to heighten our confidence in a test of "general associational activity" as the link between social class and religiosity simply because it represents the supportive core of Protestant laymen.

THE REPLICATION

For the purposes of the replication it is important to note that Goode's argument contains an unstated premise. He assumes that the religious will be characterized by a unique church-linked quality and that church-linked indicators which are dependent on nonchurch variables will not be indicators of such a unique dimension. If one were to find, therefore, that one could predict church-linked activity from nonchurch activity, one would be required to discard the former as indicators of the religious and search for other, more adequate, church-linked measures.

In order to test the adequacy of church-participation items as religious measures, therefore, his strategy is to test his implicit alternative hypotheses (1) that the middle class is more religious and religiously concerned and (2) that the middle class is simply more associationally active. Either hypothesis is supported by the simple relationship traditionally found to exist between social class and church participation. Further, it is our contention that it is precisely in these alternatives that Goode has captured the conceptual polarity within the discipline. The first hypothesis is representative of the institutional model and the second of the psychological model. The replication may serve, therefore, to suggest a resolution of that polarity.

Before testing the empirical adequacy of these two hypotheses with a three-variable test, Goode felt it critical to establish, for his data, the relationship between social class and church participation traditionally found in such material. His argument further requires that he both demonstrate a relationship between social class and nonchurch activity and establish a dimension of associational activity which is available in both church-linked and nonchurch activity measures.

First, therefore, he demonstrates that there is a simple relationship between church participation and social class. Using occupation and education

[4] The church sample includes 15 percent whose annual incomes are less than $4,000, while those of 30.9 percent of the American are so. For incomes of $8,000 or more, the respective figures are 32.4 percent and 26.6 percent. Only 12.7 percent of the church sample are service workers, laborers, operators, and private household workers, while 37.9 percent of the population are so employed. For proprietors, managers, officials, technical workers, and professionals, the figures are 47.5 percent and 23.4 percent, respectively. Population figures for these comparisons are taken from the U.S. Bureau of the Census (1962, pp. 207, 215, 225–26).

as indicators of social class position, and church attendance, financial cor tributions, and leadership positions as indicators of church participation, h finds five of the six resultant cross-tabulations statistically significant at th .001 level. The replication using the national church sample produced th same results. Five of the six possible cross-tabulations are significant at th .001 level. These cross-tabulations are collapsed and presented in tables and 2 to indicate the strength of the sample relationship in comparison wit Goode's findings.[5]

Second, Goode demonstrates that "non-church activity is significantl related to social class." Using the number of nonchurch organization memberships as the nonchurch activity measure, education and occupatio are found to be positively related to it. The replication confirms this finding producing two cross-tabulations significant at the .001 level with epsilon between the extremes ranging from 20 to 53 points.

Third, Goode argues that "church participation is significantly related t non-church participation." He reports that only two of the three possibl cross-tabulations are significant. The replication confirms this. Church at tendance is not significantly related to nonchurch activity, but contributin financially to a church and holding a church office are related at the .00 level of significance with epsilons between the extremes ranging from 3.5 t 26 points.

Having established in the replication the commonality of "non-churc activity" between both social class and church-participation measures an the simple relationship between social class and religious participation wit the same degree of confidence as achieved by Goode, it now remains t examine the impact of "non-church activity" in a three-variable test of tha simple relationship. Goode reports that "when general non-church forma organizational participation is controlled, the original uncontrolled relation ship between class and church activity is greatly attenuated." The attenua tion achieved may be judged in a comparison of the epsilons for the origina and controlled relationships reported in tables 1 and 2. When the difference between epsilons in the original and the "high nonchurch activity" cross tabulations are compared, it will be seen that the attenuation achieved in the replication is similar to that achieved by Goode.

In conducting the replication, however, several critical weaknesses in these findings reported by Goode become manifest. Specifically, these weaknesses are (1) the inability of the measures of church participation- worship, contributions, leadership—to perform unidimensionally in relation to nonchurch variables as claimed; (2) the inadequacy of the empirica evidence for a dimension of general associational activity; and (3) the failure to achieve a "greatly attenuated" relationship between social class and religiosity in the three-variable test as reported.

[5] Because of the editing process used, the Ns of the cross-tabulations from which this and tables 4 and 5 were derived vary from 8,935 to 12,784. The individual Ns are, therefore not reported within the tables. We will be delighted to provide this information upon request.

	Disregarding Nonchurch Activity				Low Nonchurch Activity				High Nonchurch Activity				Attenuation
	No College	Some College	College Graduate	ε	No College	Some College	College Graduate	ε	No College	Some College	College Graduate	ε	
Church attendance:													
Goode	56	55	55	− 1	55	53	55	0	57	56	55	− 2	1
National sample	63	63	61	− 2	62	64	64	2	63	62	61	− 2	0
Church contributions:													
Goode	43	45	51	8	39	35	43	4	50	53	54	4	4
National sample	30	33	36	6	28	28	32	4	35	38	38	3	3
Church leadership:													
Goode	29	36	43	14	26	26	37	11	34	43	45	11	3
National sample	28	36	43	15	24	29	32	8	36	43	47	11	4

NOTE.—(*a*) Indicator for a "high" level of church participation: church attendance—attendance three times a month or more, church contributions—contributes regularly to at least three church funds, church leadership—holds an officership in at least one church organization. (*b*) Indicator for nonchurch activity "low"—mentions membership in fewer than two nonchurch organizations; "high"—mentions membership in two or more nonchurch organizations. (*c*) Epsilon calculated as the difference between extremes, i.e., "No College"–"College Graduate."

TABLE 2—PERCENTAGE "HIGH" IN CHURCH PARTICIPATION BY OCCUPATION

	Disregarding Nonchurch Activity					"Low" Nonchurch Activity					"High" Nonchurch Activity					Attenuation
	Lab.	Sales	Mgr.	Prof	ε	Lab	Sales	Mgr.	Prof.	ε	Lab.	Sales	Mgr.	Prof.	ε	
Church attendance:																
Goode	49	55	52	58	9	49	56	50	57	8	53	53	52	59	6	3
National sample	58	61	52	57	− 1	58	65	60	64	6	57	56	47	54	− 3	2
Church contributions:																
Goode	38	45	52	50	12	33	38	39	42	9	43	52	58	54	11	1
National sample	28	29	32	38	10	26	27	31	34	8	33	32	33	40	7	3
Church leadership:																
Goode	25	33	42	42	17	22	29	32	36	14	30	36	48	46	16	1
National sample	24	30	40	39	15	21	26	29	31	10	31	35	47	42	11	4

NOTE.—Lab. = manual laborer; Sales = sales and clerical, Mgr = managerial, Prof. = professional. For meaning of other indicators, see table 1. Epsilon calculated as

As will be seen, the logic of Goode's analysis depends in part upon treat ing items describing church participation as a single dimension. He sug gests that "religious ritual, such as church attendance, relates to othe variables in a manner almost identical to non-ritualistic forms of churcl participation, such as church leadership or church organizational activity They will be conceived of, therefore, as being parts of the same dimension.' However, in the replication as described in tables 1 and 2, church attendanc fails to relate significantly to any nonchurch variable, unlike the other tw measures of churchly activity.

Important support for Goode's argument is derived from the existence o a dimension of "general associational activity" available in indicators o both church-linked and nonchurch behaviors. One's confidence with respec to the claim for such a dimension will be in large part a function of th empirical devices used to establish its existence. However, when one of th indicators of churchly activity—worship—proves defective, and a second— number of contributions made—is unable to evidence a strong relationshi with it, the claim to perceive a dimension of general associational activity is perforce, dependent upon a single measure of church-linked activity and single measure of nonchurch activity. It is precisely upon this single rela tionship between number of nonchurch organizational memberships an number of church leadership positions held that the case for such a dimen sion largely rests. One's confidence in the establishment of this dimension which is said to incorporate both church and nonchurch activity, cannot b great.

In light of the above criticisms it is even more important that the clain to attenuate the relationship between social class and church participatio be clearly and unambiguously demonstrated from tables 1 and 2. However because church-participation items do not appear to form a single dimen sion, attenuation must be demonstrated between each participation iten and the measures of social class for each category of nonchurch activity When each epsilon is examined, the replication reveals no attenuatio greater than 4 points. Given the character of the pattern of attenuation o all the items, a difference of 4 points cannot be regarded as a clear demon stration of an attenuated relationship.

Even though the replication was able to improve Goode's empirical at tenuations on two of the six relationships reported, our inability to claim significant attenuation for the replications leads us to conclude that Good himself has not empirically supported his claim. The relationship betwee social class and church-participation items in both Goode's analysis an the replication stands substantially unaffected in the three-variable test.

This is to say, finally, that the critical test of the relationship betwee social class and church participation which should allow Goode to choos between the alternative hypotheses concerning the nature of middle-clas religiosity has failed to provide the empirical basis for such a choice. A closer examination of both his analysis and the replication suggests tha the fault does not lie in the logic of the three-variable test but, rather, in th choice of the control variable. The resaon for the failure of the nonchurc

activity item to act as a satisfactory control variable lies in the fact that it is not an independent measure of some dimension distinct from social class; in these data, rather, it is a measure of social class almost as useful as education, occupation, or income. In fact, so strong is the inter-item relationship among these four variables, were one willing to accept an error of 12 percent rather than 10 percent in a search for a Guttman-like social class scale, it would be possible to use that item as part of such a social class dimension. It cannot possibly, therefore, mediate between social class and church participation. However, the relationship between nonchurch activity and other social class measures should encourage us to regard social class as describing styles of life which may or may not contain the value of activism.

The search for a control variable adequate for Goode's original intentions, on the other hand, must be guided by the requirement that it be independent of social class position as a "style of life" but capable of containing that life style if, in fact, social class position were to be the meaning of church involvement and participation. Given such a control variable, the three-variable test should have the power to permit a choice between Goode's alternative hypotheses concerning the character of middle-class religiosity and thus, ultimately, between the conceptual polarities of the discipline.

To establish a more sensitive instrument to measure social class position using objective indicators which might also contain commitment to value orientation as styles of life, a Guttman-like scale was sought among various background items in the questionnaire. Using dichotomized responses to the questions concerning income, occupation, and education, a scale was obtained which contained 9.3 percent total errors and proved to have a reproducibility of 0.97 and an error ratio of 0.41. The assumption that the Social Class Scale contains commitment to value orientations such as "activism" is empirically demonstrated in table 4 where the relationship between social class position and membership in nonchurch organizations is shown to have an epsilon at the extremes of 48 points.[6]

In order to obtain a control variable which might contain the meaning of church participation of the layman but would not preclude alternatives to social class as the meaning of that participation, a simple description of the link between the church member and his congregation was sought. From among those items in the questionnaire describing personal satisfactions with membership, numbers of associates and friends in the congregation, perceptions of self-involvement in the church, etc., three items were found to form a Guttman-like scale. Using dichotomized responses to the questions, "How good a job do you think your congregation is doing?" "Approximately how many members of our congregation do you know by name?" and "Of your five closest friends, how many are also members of your congregation?" a scale was produced which contained only 7.8 percent

[6] Recall that, had we been willing to accept a 12 percent total error, a Guttman-like scale would have been produced which included a measure of membership in nonchurch organizations.

total errors and proved to have a reproducibility of 0.97 and an error ratio of 0.35. The scale types were taken to mean a continuum of "high" to "low" church integration; as such, then, it will be referred to as the Integration Scale.

The independence of the Integration Scale from the activistic value orientation which may be contained in social class positions may be seen in the failure of that scale to predict membership in nonchurch organizations. It will be noted in table 4 that the epsilon between extremes in the resulting cross-tabulation is but 2.5 points. Table 3 describes the direct relationship between the Integration and Social Class Scales. The curvilinear relationship present in that cross-tabulation suggests that the criteria for the control variable have been met. The Integration Scale is independent of social class position in that there is no direct relationship between the

TABLE 3

PERCENTAGE OF EACH SOCIAL CLASS POSITION WITHIN THE INTEGRATION SCALE TYPES

	Social Class				
Integration	I	II	III	IV	Totals
I	13.0	13.7	15 8	24.6	15 6
II	60 0	53.0	44.3	35 7	50.1
III	22 2	27 6	32 7	31 4	28 0
IV	4 8	5 7	7 2	8 3	6 2
Totals	2,329	3,514	2,249	1,384	9,476

NOTE.—Social Class I–IV = high–low; Integration I–IV = high–low.

scales; however, the Integration Scale contains persons whose link with their congregation is a function of their objective social class position. Thus one's chances of being highly integrated are best if he is from the lowest social class position, while his chances of being fairly well integrated are best if he is from the upper-class positions.

The meaning of the Integration Scale as a descriptive measure of the link between the individual and his congregation is further demonstrated by its capacity to predict responses to church participation and involvement items. This becomes particularly clear when the Integration Scale is compared to the Social Class Scale on such items in table 4. Nonetheless, the reader should note the increasing predictive capacity of the Social Class Scale when comparing its relationship with the three church-participation items. This suggests that certain forms of church participation, such as an officership in the congregation, may, in some way, derive their character from linkage with a particular social class position, while others, such as attendance at worship, may derive their character from the various meanings which church membership has for individual churchmen.

With the Social Class and Integration Scales, our strategy requires us to proceed to the investigation of the attenuating effects of this third variable.

TABLE 4

PERCENTAGE "HIGH" IN CHURCH AND NONCHURCH PARTICIPATION BY SOCIAL CLASS AND INTEGRATION

	Social Class					Integration				
	I	II	III	IV	ϵ	I	II	III	IV	ϵ
Church attendance	58.6	63 5	61 0	61 3	− 2.7	73.3	66.5	51.3	35.2	34.3
Membership in church organizations	63 3	65 4	57 1	52 5	10.8	75 0	75 5	36.5	21.8	53.2
Church leadership	43 3	37 0	28 1	24 9	18.4	46.2	46 3	13.4	8.4	37.8
Nonchurch activity	71 5	58.2	34 7	23 5	48.0	46 4	58 8	43 0	45.5	2.5

NOTE.—(*a*) Social Class I–IV = high–low. Integration I–IV = high–low. (*b*) Indicators for "high" level of church participation: church attendance three times a month or more, membership in one or more church organizations, officership in at least one church organization. Indicator for "high" nonchurch activity: mentions membership in two or more nonchurch organizations. (*c*) Epsilon calculated as the difference between extremes, i.e., I and IV.

Table 5 describes, in collapsed form, the effect of integration on the relationship of social class to church-participation measures. When the average of epsilons for each item in the controlled relationship is compared with those of the uncontrolled relationship between social class and church participation given in table 4, no difference between epsilons on any one item is found that exceeds 6 points. Thus, while integration clearly intervenes between social class and church participation because of the alternative meanings of church membership contained in the Integration Scale, it is

TABLE 5

PERCENTAGE "HIGH" IN CHURCH AND NONCHURCH PARTICIPATION BY SOCIAL CLASS AND INTEGRATION

	Integration I					Integration II				
	Social Class					Social Class				
	I	II	III	IV	ε	I	II	III	IV	ε
Church attendance	70.1	75.1	73.6	71.3	−1.2	61.9	67.6	68.8	71.1	−9.2
Membership in church organizations	79.1	79.5	72.5	67.7	11.4	73.5	78.5	75.1	70.9	2.6
Church leadership	52.6	47.8	43.9	40.5	12.1	52.9	47.5	40.5	34.4	18.5
Nonchurch activity	73.5	52.3	34.7	25.2	48.3	75.6	63.2	40.9	30.0	45.6

	Integration III					Integration IV					Average
	Social Class					Social Class					
	I	II	III	IV	ε	I	II	III	IV	ε	ε
Church attendance	48.8	54.7	50.3	48.3	0.5	30.5	40.4	34.2	31.8	−1.3	−2.8
Membership in church organizations	37.1	42.0	33.0	29.0	8.1	23.6	24.2	21.7	15.8	7.8	7.5
Church leadership	18.4	16.8	8.7	7.6	10.8	12.6	11.0	5.5	3.9	8.7	12.5
Nonchurch activity	63.0	54.0	28.8	17.3	45.7	52.9	45.0	26.6	14.6	38.3	44.5

NOTE.—(*a*) For a description of the indicators, see footnote on table 4. (*b*) Epsilon calculated as the difference between extremes, i.e., I and IV.

unable significantly to attenuate the original relationship between social class and church participation.

This is to say that the powerful relationship which exists between integration and church participation and the meaning locked up in the former measure are not ultimately representative of the final character of an individual's relationship to a congregation. But, rather, the determinant link between integration in the congregation and measures of church participation is to be found in the value orientations contained within the social class measure. This suggests that a great number of persons in this sample utilize social class as life style to attribute meaning to their church participation. This enables us to argue that, not only do certain roles, like

officerships, derive their character from linkage to a particular social class position, but members themselves use such social class positions to motivate their church participation.

These data suggest, therefore, that the more useful exercise would be to generate a theory of church participation in which social class is the meaning of church participation rather than, as Goode does, attempt a critique of church-participation items as to their effectiveness in measuring that which is both uniquely "religious" and church-linked. To conclude otherwise, as Goode does, means to become acquiescent in the "institutional" position within the discipline. For, in his finding that church-participation items retain their sacred character for the lower classes but have become "secularized" for the middle classes, he adopts the institutional stance which argues that social class will provide the form of religious expression. Because the replication does not support such a conclusion, a unifying theory of social class and church participation must be constructed if it is to allow us to suggest a solution to the conceptual polarities of the field which have been our concern throughout the paper.

DISCUSSION

To take social class seriously in a theory of church participation, without dismissing it as a purely formal element, means that we must begin with an understanding of *social class as the meaning of church participation*. In its Durkheimian form, such a position would hold that church participation is a symbolic method of representing one's relation to society. In the case of our data, the relation to society is expressed in the Social Class Scale. As a consequence, therefore, the position to be taken begins with the assumption that church participation is a symbolic method of representing one's social class position. This understanding requires further that churches, on the one hand, be organized around class values and that members, on the other hand, be motivated by values locked into their social class position. One would expect to find, therefore, a direct correlation between social class position and church participation.

Our data indicate that the congregations represented in our national sample organize themselves around the middle-class life style. This is most clearly seen in the middle-class character of this national sample of core churchmen (see n. 4 above). Further, if officerships can be taken as a crude approximation to those roles of leadership about which a congregation conducts its common life, then the overrepresentation of the higher classes in such roles may be taken as an indication of the middle-class character of that common life. Thus it is that, as roles within the congregations become better examples of the symbolic values of the congregations, social class position plays an increasingly determinate part in role allocation as we move from indicators of participation such as worship attendance to officerships held (see table 4). This is borne out in the suggestion of a hierarchy of symbolic representativeness of congregational roles in the increase of epsilons from worship to officership in table 5. Finally, the middle-class

orientation of the congregations is revealed when one notes in table 5 tha the greatest differences between the extremes in the Social Class Scale ar found at the highest levels of the Integration Scale in the allocation (officerships.

Now, if persons use social class to ascribe meaning to their congregations membership and these same congregations are, in fact, structured aroun the values of the middle class, then, for our data, a direct correlation be tween the Social Class and Integration Scales should be found. However, a can be seen in table 3, the direct relationship holds only for Integratio Types II, III, and IV. In contrast, the most highly integrated people ar most likely to be drawn from lower-class positions. This contradiction can not be explained by the presence of churches whose structures reflect lower class values; the argument made above clearly rules out that possibility Our problem, then, is to construct an understanding of what it means to b highly integrated in congregations organized about middle-class life style without accepting the proposition that lower-class membership in congrega tions will be different precisely because it is lower class.

At this point it is well to recall that the Integration Scale is the most ef fective predicter of congregational participation for these data (see table 4) Persons who are Type I on the scale are, therefore, those who conform most closely to congregational norms. The question must be raised, then, as to why we would find such conformists most likely to be drawn from the lower classes when their congregations are, in fact, organized around middle-class values. Argyle (1957), Blau (1960), Dittes and Kelley (1953), Hochbaum (1954), Kaufman (1957), and Record (1957) among others have demonstrated a general relationship between overconformity and aspiration. This churchly overconformity most probably indicates, therefore, aspiration to middle-class values or else lower-class persons would not be members of the active, supportive core of their congregations. Is the church, then, simply a mechanism by means of which individuals are enabled to act out their aspirations to the middle-class life style? Clearly not. The data indicate that over 25 percent of the persons in this sample of churchmen are drawn from the upper-middle class. Thus any unified theory of church and social class must take into account the presence of both aspirant and actualized middle-class life styles among active, supportive congregational members.

A general theory which postulates that congregations are organized around the celebration of middle-class life styles will need to take into account this bifurcated character of congregational membership. Values, activities, and attitudes of congregational membership may then be seen as collected within a typology which includes at least two crude but identifiable ideal types of congregational members. On the one hand, there are those who have in fact achieved that style in their lives, and, on the other hand, there are those who aspire to that life style but have not achieved it. Hereafter we shall term these types "realized" and "aspirant," respectively.

This means, then, that congregations must provide for the expression of both aspirant and realized middle-class values in order to maintain the support of their members. Congregations must provide for activities which

are the direct expression of the middle-class life style both for those who use their membership in the congregation as a means to maintain their realized middle-class status and for those who use their membership for training in that complex of middle-class values, attitudes, and behaviors to which they aspire. Thus a Mrs. Smythe ("realized") will maintain her class status through her chairmanship of the Program Committee of the Woman's Society, while a Mrs. Brown ("aspirant") will be "in training" as a member of the Food Preparation Committee under Mrs. Smythe.[7]

Simultaneously with its provision for a direct expression of middle-class life styles, however, the congregation must also provide for activities which expressively link the member to the congregation at the point of his *actual* position in the Social Class Scale. It must provide means of saying, finally, that social class really does not matter in the fellowship of the congregation. Only in this way can an "aspirant" be legitimated as a member of a congregation organized around a middle-class value set. Mrs. Brown must at some point know that Mrs. Smythe is a sister to her in the fellowship, while at the same time, Mrs. Smythe must be able to accept that definition and make it consistent with her "realized" middle-class status.

By providing, simultaneously, then, activities which are direct expressions of middle-class values deriving their character directly from that life style, and activities which are expressions of membership, the congregation organized about middle-class values is able to offer its members expressions of "realized" and "aspirant" life styles and, at the same time, provide the interpersonal definitions of membership which allow for the maintenance of membership and the socialization of "aspirants."

In order to test the adequacy of this formulation, a series of hypotheses can be derived from which we will be allowed to utilize the data from our national sample of churchmen.

A. *When crude indicators of objective social class position are used to predict church participation, the power of actual social class position to explain church participation will be qualified both because of the presence of "realized" and "aspirant" members in congregations and because our church-participation measures define activities which provide functional vehicles for the enactment of these "realized" and "aspirant" values.*

A1. As an artifact of the interaction of activity and aspiration, lower-class members will utilize more often the activities expressing membership than those more directly expressing middle-class status. Such persons will appear, therefore, to be more "devotional" and, therefore, more "religious" when the institutional model is utilized in the analysis.

A2. As an artifact of this interaction, members of higher-class status will utilize more often the activities which more directly express middle-class status. Such persons will appear, therefore, to be more "activistic" and, therefore, more "secular" than their lower-class counterparts when the institutional model is utilized in the analysis.

[7] This use of church activity as explicit training in middle-class life styles for those with upwardly mobile aspirations was early described by Withers (1945). Among Protestants the relationship between upward social mobility and "denomination skipping" is well known. The use of churches for training grounds in the skills, attitudes, and beliefs of the middle class was made explicit by Johnson (1957).

A3. Because congregations provide both for the enactment of "realized" and "aspirant" status, role allocation within the congregation will reflect the degree to which some aspirant members have acquired the middle-class attitudes, skills, and behaviors extant in the common life of the congregation.

With regard to Hypothesis A, table 3 describes the failure of social class to predict clearly integration within a congregation. Hypothesis A1 is more clearly confirmed in the relationship between social class and the church-participation items. In table 4 this is expressed as a decrease in the percentage of lower-class persons as one moves from more general activities, such as worship, to the more particularly middle-class activities, such as officerships. Hypothesis A2, similarly, is confirmed by the increase in the percentage of upper-class persons as one moves from worship to membership in church organizations. In the case of Social Class I, the decline in the percentage of those officerships held is a function of the officerships available in any one congregation. The reader, of course, will be aware that the important relationship here is seen in the epsilons between Social Classes I and IV. Hypothesis A3 is confirmed in the demonstrated power of the Integration Scale to predict on all indicators of church participation (see table 4). This last hypothesis also accounts for the increase in the probability of holding an officership or belonging to a congregational organization when one is Social Class IV yet is Integration Scale Type I (see table 5).

B. *Being well integrated within the congregation is a way of providing individuals for role allocation within the congregational structures. Yet, because certain roles are more representative of the middle class, when that selection is actualized, it will be on the basis of social class position rather than on the basis of integration in the congregation. Social class status will, therefore, increasingly predict participation in activities as the latter increasingly come to contain expressions of a middle-class life style and increasingly require middle-class-linked skills.*

B1. Aspirants will, therefore, be overrepresented in all congregational activities except those which most closely represent the middle-class values of the congregation. Aspirants will overconform in dimensions of church participation which will allow them access to those middle-class values in spite of their actual social class position.

B2. Persons with realized status, on the other hand, will be overrepresented in congregational activities which most closely represent the middle-class values of the congregation and will be underrepresented in activities which provide access to middle-class life style for aspirant members of the congregation.

Hypothesis B is supported in the increasing epsilons in table 5 as one moves from worship to officership. Hypothesis B1 is supported if the following considerations are borne in mind. For these data, Social Class II will be taken to contain persons aspirant to the middle-class status because, for these data, this scale type exhibits consistent overconformity in both church and nonchurch activities. In table 5, Social Class II's tend to be overrepresented in worship attendance and membership in church organizations at all levels of integration. However, for officerships, which more clearly represent the middle-class values of the congregation, aspirancy is no longer the most determinant factor in role allocation. Hypothesis B2 is clearly demon-

strated in the relationship between social class and officership, regardless of one's integration. The relationship between actual social class position and officership, as represented by the epsilons in table 5, holds at every level of integration.

C. *Persons who have, in fact, realized the middle-class life style will not require the same extent of involvement in their congregations as aspirant members in order to confirm that status, since they have access to alternatives of enacting the meaning of their realized status in other voluntary organizations.*

Hypothesis C is generally confirmed in the relation between social class and worship attendance, church organizational membership and nonchurch organizational membership (see table 4). It will be noticed that Social Class I's tend to utilize membership in nonchurch organizations to a greater extent than either worship or membership in church organizations. On the other hand, Social Class IV's reverse this pattern of utilization. It will be noted in table 5 that these patterns of utilization hold when the control variable is introduced into the simple relationship. Further evidence for this hypothesis is found when one compares the simple relationship for Integration Scale Type II's, which type contains by far the largest proportion of Social Class Type I's, with each of the other Integration Scale types. It will first be noted that Integration II's tend to utilize nonchurch organizational membership to a greater extent than any other Integration Scale types (see table 4). This suggests that such persons will have alternatives to the church for confirming realized values and enacting aspirant values. Therefore, we should expect that they will participate less highly than Integration Type I's in worship which we claim to be an activity requiring but minimal middle-class-linked skills (see table 5). Nonetheless, the middle-class skills learned outside the church by lower-class persons will not be helpful in obtaining access to a role representative of middle-class values mediated through church structures, for example, officerships. Thus we would expect the relationship between social class and officerships to hold in a positive relationship (see table 5).

CONCLUSION

Confronted with a conceptual polarity in the field of the sociology of religion, a scholar must develop analyses of church-linked data which will enable him to decide the direction of his future work in the field. He must choose, therefore, between an institutional or a psychological model of the religious as the grounding for his work. It is in the examination of the relationship between social class and church participation that he can find a real beginning in making the choice between the conceptual alternatives. If it can be demonstrated that social class simply provides the form of religious expression, then he can maintain the institutional model with conviction; on the other hand, if it can be shown that social class, more than the form, provides the meaning of church participation, then he must consider seriously a psychological or social-psychological model.

Because Erich Goode's work appeared to recognize the critical character of the social class/church participation relationship with respect to this conceptual polarity, replication of his work was adopted as our strategy for moving toward a resolution of the problem. However, our replication with a national sample of churchmen revealed that Goode, rather than moving toward a resolution of the problem, had settled too simply for a methodological critique and the "institutional" model. His conclusion that church participation is "secular" for the middle class and "specifically religious" for the lower class is but a restatement of the "sacred/secular," "sect/church," "other worldly/this worldly," and "devotional/activistic" dichotomies which result from the use of an institutional model of the religious. Indeed, he could not have concluded otherwise. The variable he chose for a three-item test of this relationship—nonchurch activity—presupposes the "sacred/secular" dichotomy.

Therefore, in order to construct a unifying theory of social class and church participation, we chose a neutral variable which, in a three-item test, might allow us to discover the determinant link between the layman and his congregation. In this test it was discovered that the more adequate interpretation of the linkage is to be found in treating social class position as the source of basic value orientations which, as such, become the meaning of church participation. Thus the "secular/sacred" and those other dichotomies related to the institutional model now appear to be a reflection of the way in which social class position provides ideological and behavioral strategies for expressing one's "realized" or "aspirant" position in congregations organized about middle-class values. The "specifically religious," "devotional," and "other worldly" character of lower-class participation should be treated as the ideological and behavioral patterns of persons who aspire to the middle class, who utilize church membership to express that aspiration, and who receive "on-the-job training" in that life style in spite of their actual lower-class status. On the other hand, the "secular," "activistic," and "this worldly" character of middle-class participation should be treated as the ideological and behavioral patterns of churchmen who have realized that status and who utilize their congregational membership as a means of enacting it.

This conclusion gives weight to the claim that serious consideration must be given to the social-psychological function of social class in linking the churchman to his congregation, and it provides for a more open exploration of the fullness of a social-psychological model of the religious. Moreover, once we take seriously the theoretical implications of the social-psychological character of the link between the individual and the religious collectivity, we are forced to consider the possibility of a variety of forms which such a link may take. Social class becomes, then, only one of these theoretical possibilities. Which is to say that our hopes for a fruitful solution to the polarity of the discipline lie not so much with the institutional model as with the social-psychological model. This means that the problem here is not, as Goode concludes, the discovery of better indicators of church participation, but the development of better studies of the meanings of church member-

ship in the life space of the individual member, undertaken without the conceptual equation of the religious with churchly involvements implicit in the institutional model. Serious consideration of an alternative model would require that attention must be given to the subjective dimensions of church membership, that adequate behavioral models of commitment must be developed, that contemporary research and theory in social organization concerned with "self in role" be utilized, and that the sociology of knowledge be taken seriously in the examination of the religious ideology of churchmen.

It is critical to note that at just such points one finds kinship between Weber and Durkheim in their original formulations. For both, the crucial problem in their studies of religion was the meaning of participation and involvement in religious collectivities. Both insist on the central character of shared meanings for an understanding of that participation and involvement. It is precisely at the point where failure to examine the constructed character of shared meanings occurs that the institutional and structural functional traditions leave their mentors. Our work, supporting the claim that a middle-class life style is the shared meaning about which church membership is constructed suggests that Weber and Durkheim's common grounding is the most fruitful area for a reconstruction of the theoretical foundations for a sociology of religion.

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Another Look at Social Class and Church Participation: Reply to Estus and Overington

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It would be out of place to attempt a full-scale critique of Estus and Overington's interesting and challenging paper. I will, instead, confine my remarks to those portions which intersect with my own work. The following charges seem to me to be warranted: (1) The authors have ignored the larger body of my work on class and religion out of which the *AJS* article was drawn and have, therefore, failed to grasp the essential points of my argument; (2) they have missed the *dimensionalist* nature of religious sociation and thus see contradiction between our two positions where continuity exists; (3) their theoretical polarity of different positions in the area is not only sterile but a false dichotomy; (4) they do not understand the basic nature of utilizing concepts for indicators in social stratification and thus fail to understand the entire operation on which the original argument was based.

Scholars of religious behavior have noted for some time that religious sociation is paradoxically related to social class according to the specific religious indicator used. For instance, church attendance is positively correlated with social class, while religious devotionalism ("religiosity") is negatively correlated. My own (1968) explorations of these curious generalizations supported them empirically. Thus, attention of recent work has moved away from the uniquely religious character of socially designated "religious" indicators to the broader social meaning of each specific indicator In a piece on the church-sect "typology," I attempt to make sense out of these seemingly contradictory relationships by introducing the notion of the *linearity* of religious sociation. This concept not only answers some of Estus and Overington's criticisms but actually bridges the gap between their criticisms and the *AJS* article (1967*b*) they criticize, as well as anticipates their extrapolations from it. I quote from this article:

> There is probably no clear-cut boundary dividing . . . "private" forms of church activity . . . from . . . "public" forms of religious participation . . . , nor dividing either of them from some of the more subjective aspects of religious sociation, such as involvement or religious "salience." For example, prayer is a "private" form of religious participation, but it cannot be called formal *church* participation. It is spontaneous and occurs at no fixed time; it is outside the sphere of observation by one's congregants. Its private character, therefore, puts it into a wholly different category, sociologically.
>
> If we were to construct a formal-subjective continuum of religious sociation it would become clear that we have a dimension varying from church attendance to subjective "involvement," with prayer, or "private" religious participation in the middle. . . . [The] more formalized and ritualized the form of religious sociation, the more positive is the linkage with social class; the more subjective and "private" the form of religious sociation is, the more negative is this class-religion linkage. [See also Goode 1967*a*.]

It seems clear to me now—as it was not at the time of the publication of the *AJS* article—partly as a result of Estus and Overington's empirical tests, that church attendance, rather than being a polar type of religious sociation as I had typified it then, is in fact an *intermediary* form, possessing some of the traits of more private forms, such as prayer, as well as many of the more formalized and public forms, such as church organizational activity.

Thus, its relationship to social class, as well as its three-variable relationship with class, holding organizational participation constant, should be somewhat different than for the other indicators of church participation. The general thesis I presented previously, therefore, still seems to me to be sound; the only difficulty lies with the specific *forms* of religious participation selected. The question Estus and Overington pose challenging the lack of continuity between church attendance and nonritualistic forms of church participation appears to be sound. In fact, I had arrived at precisely the same empirical findings in another article (1968, p. 9, tables VI and VII), that church attendance did not relate significantly to nonchurch organizational membership, while another measure of church activity, holding officerships in church organizations, did relate, and powerfully. Unfortunately, I was not able to see the essential differences between the two forms of religious activities. With the conceptual bridge provided by my discussion on the church-sect dimension, it now makes sense. In this light, I see Estus and Overington's work as an extension of my own. However, since they were ignorant of my work aside from the *AJS* article, they were unable to see it.

It is incredible that, more than a quarter of a century after C. Wright Mills's devastating attack on the methodological blunders of slopping together indicators of social class, mature sociologists would still insist that this is the way that social class ought to be studied. Can it be possible that, today, the suggestion is put forth seriously that a *consequent* of social class actually be used to *measure* social class? Do we still make no distinction between cause and consequence? In 1942, in a review article of Warner's *The Social Life of a Modern Community*, Mills wrote:

> If you define a concept along one line, then you can study other items that vary with it. But if you define it so as to make it a sponge word, letting it absorb a number of variables, then you cannot ask questions with it concerning the relations of the analytically isolatable items which it miscellaneously harbors. [See also Dillingham 1967.]

Estus and Overington suggest that we revert back to this archaic form of doing research: find anything and everything that relates to an item, and declare each to be an "indicator" of that item. For practical purposes, nonchurch organizational participation may, indeed, be used as an "indicator" of social class, but to relegate organizational activity *theoretically* to the status of such an indicator is to abdicate attempting or understanding explanation and causality. In the larger monograph from which the *AJS* article was taken (1966) I attempted to formulate an explanatory scheme to *account for* greater middle-class organizational activity. This exploration is not possible, however, if one is taken as an indicator of the other: their

ssociation is assumed, and our job is completed—as well as completely vorthless.

There are numerous statements scattered throughout Estus and Overington's piece that I find remarkably curious which are simply inaccuracies and nay be stated as such. For instance, "For Goode this does not mean that ocial class variations on measures of religious activity and involvement lescribe differing styles of religiousness . . ." could not possibly be more gregiously in error. In fact, it was precisely as differing religious "styles" hat I have chosen to describe these class differences (1968). Or: "Goode . . . ssumes that the religious will be characterized by a unique church-linked uality . . ." is again the precise opposite of my own point of view. I have ttempted to *remove* the religious motivations from church activities, and he church link from religious activities. Errors such as these occur with uch frequency that the plausibility of the authors' thesis is called into uestion.

This is unfortunate. For, in spite of the many flaws in the Estus and Overington piece, it is not without merit. Their unwitting attempt to larify and make more precise the notion of religious participation is a vorthwhile and successful venture. It pins down empirically my earlier peculations. In such attempts are continuities in social research achieved.

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Sleep Deprivation: A Cause of Psychotic Disorganization

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The evidence from sensory and sleep deprivation studies and from autobiographical accounts suggests that depersonalization, disordered thought, hallucinations, and delusions are normal experiences under certain sets of circumstances. Some of these circumstances, particularly sleep deprivation, appear to be characteristics of an individual on the brink of a psychotic break. A model is proposed indicating how these circumstances might produce the psychotic disorganization of the mentally ill. If this explanation is correct, then when it is combined with the societal reaction perspective and certain personality variables we should be close to a valid theory of mental illness

INTRODUCTION

State of the Field

For more than 100 years, the theory and treatment of mental disorder have been almost exclusively the concern of the medical profession. Medicine approached mental disorders with a paradigm developed in the treatment of biological disease, and it has used this paradigm in attempting to explain psychiatric disorders. This perspective on mental disorders, in spite of an enormous effort, has not produced an understanding of mental illness. Not only, as Scheff (1963) indicates, do we lack a substantial verified body of organized knowledge regarding mental illness, but we do not even have any accepted etiological theories available for testing (Hollingshead 1961; Jackson 1960; Hoch and Zubin 1966). Furthermore, the present system of classifying psychiatric disorders has consistently been found unreliable even with regard to placing a person within such gross taxonomic categories as neurotic, psychotic, or character disorder (Beck 1962; Kreitman et al 1961; Zubin 1967, p. 373–406) and at best there is only a slight relationship between symptom manifestation and diagnosis (Zigler and Phillips 1961; Freudenberg and Robertson 1956; Zubin 1967, p. 373–406). Not only are the causes of most mental disorders unknown and a matter for speculation, but the way mental illness has been approached and classified is open to question.

Societal Reaction Perspective

Recently a number of writers (Lemert 1951; Erikson 1957; Goffman 1961; Scheff 1963, 1966; Szasz 1961; Laing and Esterson 1964) have pointed to the social process, particularly to the social expectations surrounding the role of the mentally ill, as a major factor in mental disorders. This approach

holds that an individual's behavior and self-concept is largely determined by the way others perceive and act toward him and suggests that the development and maintenance of mental illness is primarily determined by the reactions of others. It suggests that if others respond to a person as if he were mentally ill, that person will tend to adopt the prescribed role, particularly if the actions are public and if institutional restraints are placed on the person. None of these authors has focused on the origin or nature of psychiatric symptoms;[1] instead they have been concerned with the characteristics of the role of the mentally ill (Goffman 1961; Erikson 1957) and with the nature and consequences of the societal reaction to persons who publicly enter this role (Scheff 1966). In its pure form, this perspective has been taken to imply that (1) virtually everyone at some time commits acts that correspond to the public stereotype of mental illness; (2) if, by some happenstance, these acts become public knowledge, the individual may, depending upon various contingencies, be publicly processed as mentally ill, and that (3) the trauma and implications of being publicly labeled as mentally ill, as well as the restraints imposed on someone occupying that role, make it likely that the individual will accept the role and incorporate it into his life-style (see especially Scheff 1966).

The evidence suggests that this approach, when taken by itself, provides an unrealistic image of mental disorder. First, many potential patients take the initiative in seeking help, apparently due to their intrapsychic difficulties,[2] an act not readily explained by this perspective. Second, the societal reaction perspective tends to overstate the consequences of being publicly labeled mentally ill. The vast majority of mental patients do leave mental hospitals, and the evidence available suggests that most ex-mental patients perform, in a manner commensurate with their class, the full range of normal societal roles (Gove and Lubach 1969; Lefton et al. 1962, 1967; Freeman and Simmons 1963). Third, persons do not readily perceive themselves or someone close to them as mentally ill; instead there is a tendency to deny that the individual is acting in a bizarre fashion and that he is mentally ill[3] (Yarrow et al. 1955; Hollingshead and Redlich 1958; Rogler and Hollings-

[1] Both Scheff (1966) and Lemert (1951) do note a distinction between the behavior (symptoms) that originally places a person in the role of the mentally ill and the behavior manifested while in that role. Neither, however, appears to view the initial symptomatic behavior as reflecting serious difficulties on the part of the prospective patient.

[2] For an example of voluntary admission rates, see Weinberg (1967, p. 183). The state hospital which the author used for his doctoral dissertation has shown a marked improvement over the years, and the voluntary admission rate rose from 3 percent in 1955 to 57 percent in 1967. A study of a sample of these patients found that most of the voluntary patients initiated their own hospitalization due to depression or disorganized thought (Gove 1968).

[3] The work of Phillips (1963) is relevant on this point, for he found that if laymen were presented with a typical set of psychiatric symptoms, they did not react as if the person with these symptoms were mentally ill. Furthermore, as even Scheff (1966, p. 86) indicates, many patients frequently deny they are mentally ill, and a group of ex-patients who generally acknowledged they benefited from hospitalization typically denied that they had been mentally ill (Gove 1968, p. 14).

head 1965; Jaco 1960, p. 18). It therefore seems unlikely that persons typi cally enter a mentally ill role simply because they act in a way that con forms to the public's stereotype of mental illness. On the contrary, the evi dence indicates that persons are typically treated as mentally ill becaus they manifest relatively severe psychiatric symptoms which create prob lems for themselves and/or other persons (Freeman and Simmons 1963 and Lefton et al. 1962).

The above criticisms of the societal reaction perspective should not b taken as a denial of the importance of this approach. The work undertake in this area shows considerable promise, and any comprehensive theory o mental illness must include it. The evidence, however, does indicate tha this approach underemphasizes a vital aspect of mental illness, namely, th "contribution" the individual makes to his illness. Probably the most im portant single "contribution" of the individual is the manifestation o symptoms. Furthermore, it is the symptoms of the mentally ill, particularl bizarre psychotic behavior, which make a mental disorder appear incompre hensible, and it is probably this aspect of mental illness that led to the de velopment and maintenance of the disease model. An understanding o psychiatric symptoms, particularly psychotic disorganization, appears to b a necessary step in developing a viable theory of mental illness.

PSYCHOTIC DISORGANIZATION

Certain psychiatric symptoms, such as being upset, depressed, or anxious which I will refer to under the general term of distress, are *not* generally per ceived as strange or incomprehensible. This is probably because everyon is regularly subject to such feelings, and most persons are, at least at som time in their lives, fairly acutely distressed. As a consequence, such affectiv states are perceived as normal. In contrast, the psychiatric symptoms o mental disorganization, especially hallucinations and delusions, are general ly thought to be peculiar or abnormal. Evidence from a wide variety o sources, however, suggests that such symptoms are normal reactions unde certain conditions, namely, those of physical exhaustion, sensory depriva tion, sleep deprivation, isolation, monotony, reaction to certain drugs, an the transition zone between sleeping and waking. The vast majority of per sons who experience thought disorders under such conditions do not becom mentally ill. They probably avoid mental illness largely because the experi ence is of brief duration, because there are no other compounding factors such as emotional distress, and/or because they and others see the experi ence as a normal although peculiar response to unusual circumstances. In the pages that follow I will explore the possibility that the thought disorde of the mentally ill can be attributed to certain of these same conditions, bu that in the case of the mentally ill there are compounding factors that both exacerbate the disorganization and make it difficult for the person to at tribute the disorganization to its immediate cause.

It has long been known that explorers and other individuals who underg isolation and hardship experience curious mental abnormalities, and a num

ber of investigators (Solomon et al. 1957; Comer, Madow, and Dixon 1967) have pointed to the similarity between such experiences and those of the mentally ill. Sometimes such persons report a feeling of depersonalization where the individual becomes detached and seems to be two persons (Noyce 1958, p. 221; Lawrence 1947, p. 32). Frequently the disorganization is more pronounced, and the feeling develops that someone else is really there (Noyce 1958, p. 222; Buhl 1954, p. 221). In fact, on some occasions the "other" person actually "helps" the individual (Davison 1952; Slocum 1911). These experiences do not occur as isolated events but as part of a general mental deterioration (see especially Buhl 1954) and are frequently accompanied by audio and/or visual hallucinations. These latter may be extremely comprehensive and vivid (Saint-Exupéry 1949, p. 152).

For the most part, these accounts have dealt with fairly unusual people functioning in unusual situations. In recent years, however, there have been a number of experimental studies in the areas of sensory deprivation and sleep deprivation that have consistently produced similar "abnormal" experiences in normal subjects.

Sensory Deprivation

Sensory deprivation has been experimentally produced in a wide variety of ways (Zuckerman and Cohen 1964). Whatever the means of producing sensory deprivation, however, the following common features have been observed: an intense desire for extrinsic sensory stimuli and bodily motion, increased suggestibility, impairment of organized thinking, oppression, depression, and the frequent development of hallucinations, delusions, and confusion (Solomon et al. 1957; Kubzansky and Leiderman 1961; Zuckerman and Cohen 1964; Goldberger 1966).

A description of the development of hallucinations in a sensory deprivation experiment is presented by Heron (1961, pp. 17–18). Hallucinations were defined by him as a "sense of perception without object." He reports as follows:

> Twenty-five of the twenty-nine subjects reported some form of hallucinatory activity. Typically the hallucinations progressed from simple to complex. . . [Eventually] full-blown scenes would appear. These seemed to be in front of the subjects. If they wanted to examine part of a scene more closely, they found they could do so more easily by moving their eyes in the appropriate direction, as they would do if they were looking at a picture.
>
> They had little control over the content of their hallucinations, nor were they able to start or stop them. They were often so vivid as to prevent the subject from sleeping, and one man left the experimental station because he was disturbed by their persistence.

In this experiment three of the subjects perceived their hallucinations to be real.

Heron notes that the hallucinations differed from normal imagery not only in that the subjects had little control over the content or occurrence of the images but also "in their vividness [and] in the fact that they appeared to be in front of the subjects instead of seeming to be somewhere be-

tween his ears." Heron (1961, p. 25) also reports that the "[EEG] recor obtained while the subject was hallucinating typically appeared similar those that might be obtained from a subject in an alerted state."

Although it has been consistently demonstrated that reduction in exte nal stimuli is related to the development in certain normal individuals unusual visual, auditory, and somesthetic experiences frequently accor panied by an inability to distinguish those experiences from reality, tl etiological basis for these experiences remains a matter of inference ar speculation (Zuckerman and Cohen 1964; Freedman, Grunebaum, ar Greenblatt 1961). Investigators frequently report the development of an iety among a segment of their subjects, some expressing a concern th they are losing control of their minds, while others manifest paranoid fea (Freedman, Grunebaum, and Greenblatt 1961; Heron 1961). Ruff, Lev and Thaler (1961, p. 84) and others have suggested there is at least indire evidence that anxiety may, in fact, contribute to the development hallucinations and delusions. The experiences in sensory deprivation expe ments are very similar to those of an acute psychosis and, as Rosenzwe (1959, p. 328) has noted, the descriptions of these experiments repeated present all of Bleuler's symptoms of schizophrenia. This suggests that mar of the same physiological processes are operating.

There are a few cases in the medical literature where the development psychotic symptoms can be ascribed to sensory deprivation. For exampl Mendelson et al. (1961) have shown rather conclusively that the develo ment of well-organized visual and auditory hallucinations and delusio among a group of nine poliomyelitis patients could be attributed to th perceptual isolation imposed by the unique conditions of life in a tank-ty respirator. Similarly, Rosenzweig (1959) describes the case of a thirty-eigh year-old housewife, who, while awaiting surgery, became quite disorganize complained that her medication was poisoned, and declared that she w being smothered. In this case, both of the patient's eyes were covered an she was isolated from other patients. Following surgery, only one eye wa bandaged, and her psychotic symptoms cleared almost immediately.

While sensory deprivation appears to have "caused" the clinical man festation of mental illness in a few cases and while analogies can be mac between the conditions of the acutely distressed and of the sensory depriv it seems highly unlikely that sensory deprivation is the cause of ment disorganization among most of the mentally ill. A good case, however, ca be made for just such a causal relationship with sleep deprivation.

Sleep Deprivation

It is very common for individuals who are in the transition zone betwee sleep and wakefulness to experience auditory and visual images, image which the subject perceives as distinct from dreams. These images ar generally referred to as "hypnagogic hallucinations," a term first coined b Maury in 1848. Oswald (1962, pp. 96–97) describes the occurrence of hyp nagogic images in the following manner:

> Hypnagogic hallucinations are said to be those (i.e., hallucinations) of "half sleep." They are experienced as discontinuous, even if recurrent, sensory experiences which seem to force themselves on the passive subject. . . . They are events of drowsiness occurring while the subject flits between wakefulness and light sleep, retaining some contact with reality, so much so that he may declare himself to have been still fully awake when he had his hallucination. . . . [Persons] will often report that they [had] them during a bout of fever when sleep was restless. Restlessness which is due to anxiety . . . also gives rise to reports of these images. The hypnagogic hallucinations are most commonly visual and auditory, but various kinaesthetic and other bodily hallucinations, as of shrinkage or swelling of a limb or constrictions about the waist, and more rarely, olfactory hallucinations are described.

Subjects generally report that their hypnagogic hallucinations, whether audio or visual, intrude into their stream of thought in an obtrusive and irrelevant manner. An additional characteristic of auditory hypnagogic hallucinations is that a voice frequently refers to the subject, commonly by name, and it appears to be the voice of someone familiar. This experience is very similar to the auditory hallucinations experienced by schizophrenics, who characteristically report that the voices they hear intervene from the outside, interfering with their thoughts, and that the voices both belong to someone familiar and touch on a subject of a personal nature (Oswald 1962, pp. 96–115). The schizophrenic tends to attribute this disruption to someone else while "normal" persons usually ascribe it to their lowered level of consciousness. In this regard, Alexander's (1909) description of his experience with hypnagogic images, in which he makes it very clear that he felt *as if* his mind were being influenced by a self other than his own, is worth noting.

There has been a great deal of discussion about the similarity between dreams, hypnagogic hallucinations, and true hallucinations. There is, to date, no empirical way of distinguishing between these phenomena apart from the context in which they occur and the interpretation made of the phenomenon by the subject and/or observer. (Oswald 1962, p. 76; Evarts 1962; West 1962). This suggests that one of the paramount problems confronting a person who is mentally ill is how to define his experience: is it real, or is it a product of his imagination? It should be noted that persons may rapidly shift back and forth between wakefulness and light sleep. For example, it has been experimentally shown that persons engaged in a monotonous, repetitive task tend to lapse into sleep between each response and to awake at the time of the response. This cyclic alternation between sleeping and waking may occur even when the rate of response is three seconds or less. Furthermore, when people fall into a light sleep for these brief periods of time, they are frequently unaware of having slept (Oswald 1962, pp. 60–65). This suggests that the schizophrenialike features of light sleep could occur in persons who were walking about and appeared to be awake to the casual observer (and themselves) if such persons experienced very brief periods where cerebral vigilance fell. Such periods of brief episodic sleep occur spontaneously in the sleep-deprived (Oswald 1962, p. 116), a state, as will be shown shortly, which is typical of acutely distressed persons.

Not only is little known about the physiological processes that are ir volved in imagery; even such a basic point as the rate of occurrence c hypnagogic hallucinations is a largely unexplored field, although mos authors have assumed them to be common. Some support for this supposi tion is provided in a questionnaire study done by McKeller and Simpso (1954), who found that, out of 110 university students, sixty-seven re ported having experienced hypnagogic hallucinations, fifty students re porting auditory hallucinations and thirty-nine reporting visual hallucina tions. As early as 1853, Maury discussed the similarity between psychoti thought and the ideas and verbal construction that abruptly appear durin the state of drowsiness. Over the years, numerous other investigator (Kraepelin 1906; Jung 1909; Hollingsworth 1911; Hoskins 1933; Froeschel 1946; Mintz 1948; Oswald 1962) have pointed to the impaired verbal con structions, to the lack of clear associations, or other forms of disorganize thought, and to the bizarre and intrusive quality of hypnagogic images a indications that the mental process of persons at the borderline of sleep ha much in common with psychotic thought processes.

Recently there have been a number of experimental studies of sleep deprivation which have consistently produced the disorders of though and speech commonly associated with psychosis (Bliss, Clark, and Wes 1959; Kleitman 1963; Morris, Williams, and Lubin 1960; Oswald 1962 Tyler 1955; West et al. 1962; West 1967; Pasnau et al. 1968). The subjects of such experiments have transitory episodes of sleepiness during whicl they function poorly, but they are generally able to maintain what appear to be a reasonably alert state. Most subjects experience a general rise i irritability, and there is a tendency to avoid activities requiring intellectua effort. The task performance of most subjects remains largely unimpairec (at least within the time limits set by the study) as long as the tasks ar neither monotonous nor require sustained attention; however, performanc does decline when the latter qualities are attributes of the task. During specific formal psychological tests, disturbances of thinking are difficult to detect, but they become very obvious in more unstructured situations Rambling speech with repetition and mispronunciation is common, as are fusions of words, neologisms, and serious blockages and intrusions of thought. Frequently there is a complete break in an act or train of thought.

The development of depersonalization is typically reported. Morris, Williams, and Lubin (1960), for example, report a subject who felt so changed that he became concerned that he might be somebody else and had to be reassured that he was still himself. Similarly, Bliss, Clark, and West (1959) mention that all their subjects felt "apart from others" and had other feelings of depersonalization. In addition, their subjects reported abnormal bodily sensations, such as peculiar electric shocks running up the leg, numbness and insulation, and flushing of the skin. Both, Kleitman (1963) and Tyler (1955) report subjects believing that they had been talking to an observer about a topic that had not entered into the conversation.

In the studies reviewed, almost all of the subjects report some perceptual changes, ranging from relatively minor disturbances to complex hallucina-

tions. Changes in the perception of time, size of self, space, weight, and speed of movement are very common, as is the illusion that stationary objects are moving. The most common hallucination reported by Tyler's (1955) subjects, who were servicemen, was seeing females. His subjects also walked into walls or bushes with eyes open and fell down steps and curbs that did not exist. Most commonly, hallucinations are perceived by the subjects as illusions, but this is not always the case. For example, one of Morris, Williams, and Lubin's (1960) subjects tried to wash off cobwebs that he could see and feel on his hands and face and later refused to believe that they had not been there. An important finding relating to the development of psychotic disorganization in persons acutely distressed is that the nature and magnitude of the subjects' disturbance in the sleep deprivation studies is at least partially determined by the environment. A pleasant supportive atmosphere minimizes the disturbance while a harsher atmosphere produces a greater and more hostile behavioral disorder (Morris and Singer 1961).

Tyler's (1955) study of 350 males who went without sleep for periods of up to 112 hours is by far the largest study of sleep deprivation. As in other studies, Tyler found that sleep deprivation produced psychoticlike reactions in practically all of his subjects, 70 percent reporting audio or visual hallucinations. What lends particular significance to his study is that seven of his subjects spontaneously developed states completely analogous to acute paranoid psychosis. These subjects carried on completely irrational conversations, became aggressive and combative, and accepted their hallucinations and delusions as real. Furthermore, these states were not transitory, and the subjects manifested no insight into their conditions. None of these subjects had any previous indications of mental abnormality, and all recovered following a prolonged sleep.

As almost all of the systematic work in the area of sleep deprivation has been done with healthy volunteer subjects placed in purposely nonstressful situations, this work has not produced a clear understanding of how anxiety interacts with sleep deprivation. It is certainly the case that some "normal" subjects find their experiences in sleep deprivation studies to be anxiety producing. For example, nineteen men in Tyler's (1955) study dropped out because they felt that the experiment was doing them harm, some of these subjects expressing the fear that they were losing their minds. On the basis of their experience, some investigators (Bliss, Clark, and West 1959; and Oswald 1962) have suggested that the disruptive effect of sleep deprivation would be magnified if it were combined with other pathological phenomena such as anxiety. It has been shown (Bliss, Clark, and West 1959) that the hallucinogenic effects of LSD-25 are considerably enhanced by sleeplessness.

The fact that sleep deprivation can, by itself, produce an acute psychotic state in normal individuals who are physically fit and of high morale suggests that lack of sleep might generally be an important factor in the development of psychosis. As has been frequently noted (Oswald 1962, p. 25; Bliss, Clark, and West 1959, p. 348; Brauchi and West 1959, p. 11; Mayer-

Gross, Slater, and Roth 1960; Noyes and Kolb 1963), clinical experience indicates that agitated and anxious persons frequently are suffering from insomnia at the time they are on the brink of a psychotic break. Support for this impression is provided by two recent studies which demonstrate that a substantial majority of mental patients have been suffering from sleep disturbances just prior to hospitalization (Detre 1966; Gove 1968).

A number of studies have been conducted on the sleep patterns of depressed hospitalized mental patients. These studies have consistently demonstrated that depressed patients have much less total sleep than normal controls, that they take much longer to fall asleep, wake up much more often, and wake up for the last time much earlier (Diaz-Guerrero, Gottlieb, and Knott 1946; Zung, Wilson, and Dodson 1964; Gresham, Agnew, and Williams 1965; Hawkins and Mendels 1966; Bliss 1967). Not only do these patients show a marked decline in the amount of total sleep, but they show a more precipitous decline in two particular phases of sleep, REM (rapid eye movement) and phase IV or deep sleep (Bliss 1967). The decline in deep sleep appears to be particularly marked; for example, in the study by Hawkins and Mendels (1966) the *proportion* of deep sleep to total sleep among depressives dropped to approximately one-fifth that of normal controls. Furthermore, it has been experimentally demonstrated that the absence of either of these two phases of sleep is related to the development of disorganized behavior.[4] West (1967, p. 545) has postulated that the psychopathology attributable to sleep deprivation results from a deficiency and intoxication, detoxification occurring during the deep sleep phase and restitution during REM sleep. It should also be noted that these studies have found a very strong positive relationship between the depth of a patient's depression and the degree of sleep disturbance (Hawkins and Mendels 1966; Bliss 1967).

There have been only a few studies of the sleep of schizophrenics, and most of these have been done on chronic patients. In general, chronic schizophrenics appear to have a somewhat erratic sleep profile and to suffer from at least a mild sleep disorder, although a few apparently have relatively normal sleep patterns (Bliss 1967; Feinberg 1967). In a recent study comparing acute with chronic schizophrenics, Lairy et al. (1965) found that the acute schizophrenics had a very serious sleep disturbance; on the average they had only two hours and twelve minutes of sleep during the night. Furthermore, the acute schizophrenics showed a marked decline in the proportion of deep sleep to total sleep. In a different study, Feinberg (1967) found that schizophrenics who were relatively recently hospitalized had considerably less sleep, particularly less REM sleep, than controls.[5] Feinberg (1967) also found that patients with a chronic brain syndrome had

[4] For the effect of REM deprivation see Dement 1960, 1968; Dement et al. 1967; Foulkes 1966, pp. 198–208. The results of these experiments should be evaluated somewhat cautiously, for example, see the comments of Vogel (1968). For the effect of deep-sleep deprivation see Agnew, Webb, and Williams (1967) and the NET broadcast, "The Twenty-first Century," March 9, 1969.

[5] He did not look at phase IV or deep sleep.

less sleep, particularly less REM sleep, than comparable controls. In a study of subjects who were extremely anxious but nonpsychotic, Monroe (1965) found sleep patterns that were similar to subjects who have a depressive disorder or who are acutely schizophrenic. These results suggest that patients who are suffering from anxiety, depression, acute schizophrenia, or from a chronic brain syndrome have the same, or at least a very similar, sleep disorder. It is a disorder that rapidly produces a sleep deficit and that especially deprives the subject of the two phases of sleep which would appear to be essential for organized, appropriate behavior.[6]

The knowledge that acutely disturbed mental patients, whether psychotic or not, suffer from a sleep disorder that is capable of producing psychotic disorganization, although highly suggestive, does not of course prove that a sleep disorder is generally the immediate cause of mental disorganization among the mentally ill. Unfortunately, there is little concrete evidence that indicates whether a sleep disorder precedes disorganization among the mentally ill. Brauchi and West (1959) and Bliss, Clark, and West (1959) have described cases where the critical factor which precipitated the development of a psychotic disorganization necessitating hospitalization appeared to be the patient's sleeplessness. Koranyi and Lehmann (1960), in a suggestive study, deprived six chronic schizophrenic patients of sleep for 100 hours, which provided an abrupt reactivation of acute psychotic symptoms that had not been present for years. A study of particular relevance is that of ninety-nine recently admitted mental patients conducted by Kupfer, Detre, and Harrow (1967), who found that the development of psychotic disorganization immediately followed sleep disturbances that lasted more than one night.

Imagery and Heightened Attention

There is evidence that normal persons will experience hallucinations not only in states of sensory or sleep deprivation, or when in the transition zone between being asleep and awake, but also when they are unusually alert. In particular, hallucinations may occur when an individual needs sensory data and is searching for clues in an ambiguous situation (Oswald 1962, pp. 76–77). Examples of such perception frequently occur in threshold experiments where a person, straining to detect a faint stimulus, may perceive what in fact is not there. Indeed, perception of an image that is accepted as real may occur without any external stimulus if vigilance is sufficiently high. For instance, some individuals will experience a hallucination of intense light and/or electric shock after a warning signal or the lapse of a fixed time interval if on previous occasions such stimuli have been regularly given.

The "ability" of persons to perceive at times of heightened attention

[6] As Feinberg et al. (1969) point out, anxiety (acute distress) appears to be a common element in these psychiatric disorders, and they feel it may well be the cause of the sleep disorders. For speculations about how REM sleep is related to psychosis, see Stern et al (1969) and Zarcone et al. (1968).

things that have no referent may have special implications for persons who are acutely distressed. Frequently, such persons are extremely anxious and uncertain about certain aspects of their lives, particularly their relationships with others. They are thus likely to be especially attentive to clues in the behavior of others which reflect upon their difficulties, while being unsure of themselves and their situation. The interplay of their anxiety, uncertainty, and heightened attention is apt to lead to misperception and misinterpretation, and in the extreme case, to delusions and hallucinations. Such perceptions and experiences are, of course, apt to decrease a person's ability to function effectively in society.

PSYCHIATRIC SYMPTOMS: A PROPOSED MODEL

The evidence from the sensory and sleep deprivation studies and from the autobiographic accounts suggests that such experiences as depersonalization, disordered thought, hallucinations, and delusions are normal experiences given a particular set of circumstances. Furthermore, the extremely similar, if not identical, character of these experiences with those of a person who is psychotic suggests that the physiological processes are basically identical. The fact that sleep-deprived persons frequently have psychotic-like experiences, in combination with the fact that anxiety and agitation tend to both inhibit sleep and heighten selective attention, provides a basis for a developmental model of mental disorganization in the mentally ill.

It is proposed that the original development of psychotic thought in the mentally ill typically occurs in the following sequence. A person becomes acutely disturbed or distressed for some reason. Although the reasons for the distress will vary, they generally will involve some sort of crisis or disruption in his life,[7] although it may simply be produced by an acute dissatisfaction with his position or reflect other intrapsychic difficulties. As he is anxious and agitated, the person will probably have difficulty sleeping, and he is therefore likely to approach the physical state found in sleep-deprived subjects. In the case of a distressed person, however, the effects of sleep deprivation will be magnified for: (1) his anxiety may interact with his lack of sleep, thereby increasing the likelihood of psychotic experiences, (2) what sleep he does have will include little of the REM and the deep-sleep phases, and (3) he is in an environment which, instead of putting him at ease, is apt to exacerbate the effects of sleep deprivation Such a person is apt to be not only acutely distressed and sleep deprived, but is also likely to be highly emotional, unsure of himself and others, and extremely concerned about particular events or relationships. A person in his frame of mind will be especially attentive to information that bears upon

[7] The recent work of Brown and Birley (1968) bears directly on this point. In a study of recently hospitalized schizophrenic patients, they found that most of the patients had recently experienced a crisis, and with a substantial majority of the patients the crisis had occurred within three weeks of hospitalization. Furthermore, most of these crises could not be attributed to acts of the prospective patient, and similar crises were relatively rare in a control group.

his situation, but his judgment will be poor and he will tend to misperceive and may even fabricate clues.[8]

The studies reviewed above suggest that a person who is acutely distressed and sleep deprived will have a poor attention span, loose and unconnected associations, and frequent thought blockages and may experience odd bodily sensations such as numbness, constriction, heat flashes, or flow of electricity. In addition, he is likely to develop feelings of depersonalization which may be associated with the feeling that the self is changed or with the feeling that it is controlled by another. If his disorder is severe, he will probably experience hallucinations and delusions, and these psychotic experiences will probably be organized around his immediate difficulties.[9] We would not expect a person having these experiences who is already distraught and in a difficult position to function effectively. His behavior is therefore likely to increasingly alienate those about him, disrupting his interpersonal relations and increasing his isolation.[10] It would appear that this process, once well underway, would have a snowballing effect.

A person who becomes disorganized due to acute distress is likely to accept his psychotic experiences as real. His experiences are apt to occur when he is up and apparently awake and there is no ready explanation for these experiences such as an experimental study or being asleep or almost asleep. The psychotic experience of someone distressed is generally sufficiently unusual and powerful that he must in some way come to grips with it. The person may feel that he is "losing his mind," but, unlike experimental subjects, he cannot leave the experiment.[11] His mental processes are already impaired, and he is anxious, puzzled, and unsure of himself and his situation. He is therefore suggestible and may accept his experiences, particularly if they provide an "explanation" for, or a relief from a difficult situation (Gove 1968, pp. 48-49). It is probably the case that much of the peculiar, idiosyncratic, and even "delusional" life organization

[8] West (1962) has recently proposed a comprehensive theory of hallucinations which views them as a product of a physiological system that becomes activated under a certain set of conditions. He indicates how sensory deprivation, sleep deprivation, and heightened anxiety and attention would activate the system. According to his formulation, two or more of the causal factors could easily be operating at the same time.

[9] It has, for example, been demonstrated that dreams and hypnagogic hallucinations tend to reflect the recent experiences of a person, particularly if the experiences have been difficult or trying (Oswald 1962).

[10] As Lemert (1962) notes, paranoid persons tend to be systematically excluded from normal social interaction although this is not publicly acknowledged and may be denied. This places the person in a very ambiguous and difficult position. As the person's difficulties increase, in part because of his exclusion, he may, by the process outlined above, become disorganized and experience delusions that have little basis in reality. Lemert did not find this latter development, but he indicates (Lemert 1962) that it may be a sequel to the process he describes and notes that his carefully selected subjects all had well-organized life-styles focused on recognized social values.

[11] He can, of course, have himself hospitalized, but the stigma involved and the facilities available are frequently such that this does not present a desirable alternative.

of the chronically mentally ill can be attributed in part to their attempt assimilate and explain their psychotic experiences. For example, a pers may recognize that he is having unusual and uncomfortable experienc but, lacking another explanation of them, he may attribute them to son one with whom he is having difficulties, particularly if depersonalizati has led him to feel as if some other self was controlling his behavior. Pro ably a major determinant of how a person defines his psychotic experien is the interpretation of these experiences the person receives from othe If others can convince him that his experiences are normal although "u real" responses to his mental condition and present situation, the pers probably would not incorporate his psychotic experiences into his life (ganization. On the other hand, if he does not receive an acceptable inte pretation from others, he will develop his own interpretation, one whi may lead to an idiosyncratic "delusional" life organization. Becker (196 has made a similar point in his discussion of the perception of the psychoti like effects of marihuana and LSD. He suggests that the development of drug psychosis can be interpreted as the reaction of a naïve user to t temporary symptoms of the drug, the user feeling, however, that t symptoms represent a permanent derangement of his mind. Becker go on to suggest that participation in a drug-using subculture tends to mir mize such occasions because other users present the person with altern tive explanations of his experiences.

I suspect, as do others (West 1967), that the persistence of an acti psychotic disorder over a prolonged period of time results in physiologic changes that increase that person's susceptibility to further psychotic e periences.[12] Elsewhere I have presented case histories which suggest th it is possible for persons chronically experiencing hallucinations to identi and ignore them in much the same manner that persons who are on halluc natory drugs learn to ignore the drug-induced illusions when they functi in the general society (Gove 1968, pp. 55-56). In these cases the corre interpretation of the hallucinatory experiences appeared to be depende upon the orientation and information provided by others.

CONCLUSION

It has probably been the bizarre symptoms of the mentally ill that led t and has maintained the disease model of mental illness, a model that ap pears to be in a state of complete disarray. It has been proposed that the bizarre symptoms are, in fact, a normal physiological response to certai conditions—conditions frequently experienced by a person who is acutel distressed. When a person is extremely anxious and concerned about hi relationships with others, he enters a state where he is apt to misperceiv the actions of others and may even fabricate clues that bear upon his pos

[12] Most of the recent studies of the sleep of chronic schizophrenics would suggest this i the case (Luby and Caldwell 1967, Zarcone et al. 1968) although unusual sleep pattern are not always found (Vogel and Traub 1968).

tion. Furthermore, his severe anxiety will tend to produce a type of sleep disorder which the available evidence indicates leads to psychotic disorganization.

Many persons who become disorganized when they are isolated, short on sleep, or are involved in other unusual and trying conditions do not become mentally ill. These persons are able to perceive the relationship between their symptoms and the condition that prompted them, and, in addition, they can readily terminate these conditions by getting a good night's sleep or by undertaking some other appropriate act. In contrast, persons who are anxious are typically engrossed in a complex array of immediate problems, and it is difficult for them to correctly isolate the immediate cause of their psychotic disorganization. Furthermore, even if they at first perceive their psychotic experiences to be a product of their mind, this in no way alleviates their distress.

In a general theory of mental illness, personality may play an important role. In the sleep and deprivation experiments, personality appears as one of the major variables determining the types of experiences subjects have (Morris and Singer 1961; Zuckerman and Cohen 1964), and it is probably reasonable to talk about certain personalities as being unusually susceptible to psychotic experiences. Variation in susceptibility to psychotic disorganization can probably be related to both social and biological factors. There is, for example, fairly strong evidence that certain types of socializing experiences predispose a person to mental illness (Bateson et al. 1956; Becker 1962). Furthermore, it is possible that individuals have different biological propensities for disorganization just as individuals apparently differ biologically in their ability to remain alert (Oswald 1962).

The focus on the individual, of course, presents only one side of the developmental process involved in mental illness. For example, it is probably the case that whether a person who is acutely psychotic becomes a chronic mental patient is largely determined by the way people react to him. The societal reaction perspective has dealt with this issue by focusing on the general factors in the social system, such as stereotypes and the institutionalized role of the mentally ill, which tend to perpetuate and stabilize a person's disturbance. However, it has largely ignored the person's disorder and the degree to which his disturbed behavior determines and maintains the expectations and reactions of others. In particular, it has ignored the interaction between the person with a mental disorder and those about him during the formative stages of the disorder. We suspect, for instance, that the way a person perceives his psychotic experiences is a key variable in the development of a mental disorder, and that this perception is largely due to the responses of others. However, we have very little understanding of the dynamics of this communication process. What is needed is research that attempts to integrate the societal reaction perspective with the individual perspective. This research should focus on the development and interpretation of psychiatric symptoms and on the factors relating to socialization into the mentally ill role.

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Premarital Pregnancy and Status before and after Marriage[1]

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Premaritally pregnant couples (PMP)—about 25 percent of those who marry in the Detroit area—are not disproportionately from low-status backgrounds. Nevertheless, they are at a substantial economic and educational disadvantage at various stages of married life, greater than that of couples having a child nine to eleven months after marriage. The young marriage age of PMP couples only partly explains their disadvantage, which is persistent even among those who marry late. Their educational disadvantage is a powerful but not complete determinant of their poor economic position.

THE PROBLEM

Marriages in which the first child was premaritally conceived are an important social phenomenon in the United States, as well as in other countries. A few studies in specific areas of the United States indicate that at the time of marriage, 20 to 25 percent of the brides were pregnant with a first child which was carried to term after the marriage.[2] Estimates for several European countries indicate an even higher incidence of such premarital pregnancies (see Goldstein 1967, and Grebenick 1959). In some

[1] This study has been made possible by research grants from the Social Security Administration of the Department of Health, Education, and Welfare (no. 312(2)-7-248), and from the National Institute of Child Health and Development of the U.S. Public Health Service. It has also been supported by the basic grant of the Ford Foundation to the University of Michigan Population Studies Center.

[2] Estimates for the Detroit area were worked out by Pratt (1965*a* and 1965*b*). For a report on other U.S. studies see Christiansen (1963). U.S. estimates, based on the linkage or comparison of dates of birth and dates of marriage, underestimate the proportions pregnant at marriage, because they do not allow for the pregnancies which ended in a fetal death as a result of spontaneous or induced abortions. Our guess is that allowance for these would increase the premarital pregnancy rate by at least 10 percent. No allowance at all is made for pregnancies and births that occur completely out of wedlock, since we are dealing here with women pregnant at marriage.

of the developing countries it is likely that this will become an increasingly important phenomenon under the conditions of urbanization and rapid social change.[4]

This phenomenon is very important, from both the point of view of the demographic history of the couples and of the social and economic consequences. Demographically, it is probable that couples who begin childbearing so early in marriage are likely to be highly fecund, and their longer than average period of risk probably means that they have more than the average number of children. In terms of economic consequences, data from a sample of Detroit couples have been used in two previous analyses (Freedman and Coombs 1966*a* and 1966*b*) to demonstrate that premarital pregnancy is associated with marked economic disadvantages after marriage which persist even when we consider couples who already have a fourth child. The married couples whose first child was premaritally conceived were shown to have lower income, fewer assets, and to be disadvantaged in a variety of other ways that could not be explained in terms of religion, age at marriage, duration of marriage, or several other plausible related factors. In those previous analyses, premarital pregnancy was considered only as one aspect of the broader question of childspacing, for which some of the problems considered now were not relevant.

In the present analysis we are concerned mainly with three principal questions:

1. Are those couples whose first child was premaritally conceived (hereafter referred to as PMP couples) drawn distinctively from lower status groups, or are they distinctive in other ways in the social strata to which they belonged before marriage?

2. Does the social background of the family of origin of the PMP couples account for their disadvantaged position after marriage?

3. Is being premaritally pregnant similar in its effects to having a child born a short interval after marriage, although not premaritally conceived? Here the question is whether it is the fact of premarital conception or the occurrence of the birth rather soon after marriage that is decisive. For example, do those couples whose first child is conceived shortly after marriage and born within the first year resemble the PMP couples? How do they compare with those who have their first child later in marriage?

Throughout this investigation we define the PMP couples as those who were married when first interviewed but who had at least one premarital conception that resulted in a live birth. We are not dealing with the more general class of premarital conceptions which includes in addition: (*a*) conceptions before marriage that result in an illegitimate birth and are not followed by a legitimizing marriage; (*b*) premarital conceptions that

[4] For example, in places like Taiwanese cities or in Hong Kong where social change is very rapid and fertility is falling rapidly, age-specific fertility rates for married women at ages fifteen to nineteen often are so high now that a plausible explanation is that premarital pregnancies are followed by a marriage. This is consistent with scattered evidence that urbanization in early industrial Europe often was accompanied by a disruption of traditional marital and fertility controls, with resulting high rates of illegitimacy and early marriage.

terminate in either a spontaneous or induced abortion and which may or may not be followed by a marriage. The group we are studying is a very important element in the population since it probably includes at least 25 percent of all currently married couples, if the data for the few areas investigated have any general relevance. This probably means that we are concerned with a majority of the more general class of premarital conception. Many more first children are premaritally conceived than are illegitimate.

DATA AND METHOD OF ANALYSIS

This analysis is based on data from two separate studies. The primary source is a longitudinal study of the family growth of white, married couples in the Detroit area, initially interviewed in 1962 after the birth of a first, second, or fourth child. Wherever possible we present a parallel analysis based on a separate study (conducted by David Goldberg and William Pratt) of couples married in the Detroit area in 1961.

The Detroit Family Growth Study, our primary source of data, involves a random sample of all white, married women in the Detroit metropolitan area who had a first, second, or fourth live birth in July 1961. The data from this study that are used here refer to the 1,053 respondents who were married only once. They were first interviewed in their homes in January–March 1962.[4] They are part of the Longitudinal Study in which three reinterviews have been carried out following the initial home interview.

Our second source of data, designated as the Marriage Study, is based on a random sample of white couples married in the Detroit area in 1960.[5]

[4] The initial interview was conducted under the auspices of the Detroit Area Study program, Department of Sociology, University of Michigan, with the assistance of the Survey Research Center. Dr. Ronald Freedman and Dr. David Goldberg were the principal investigators. The sample for the study was restricted to white, married women living with their husbands. Cases in which the mother had a child who died before the initial interview, cases of multiple births, or cases in which the most recent birth involved a serious congenital birth injury were excluded. Extremes of age—wives under fifteen years or over thirty-four years of age at the first parity, wives under fifteen or over thirty-nine years of age at the second parity, and wives under twenty or over thirty-nine years of age at the fourth parity—were also omitted. These exclusions affect only a very small proportion of the white couples in the indicated parities. With these restrictions, a one-in-three random sample for first and second parities and two-in-three for fourth parity were selected from birth records. The response for the first interview was 92 percent. These women were reinterviewed, mainly by telephone, in October–December 1962, in October–December 1963, and in July–December 1966. The material presented here is based mainly upon questions asked at the initial interview. A sample of just-married women also interviewed in the original Longitudinal Study is not included in the present analysis for several technical reasons.

[5] This study, by David Goldberg and William F. Pratt, was supported by a Public Health Service research grant from the National Institute of Child Health and Human Development. Couples were excluded initially if the wife was over forty-four years of age at the time of the marriage or if the wife reported a previous marriage. A sample of Negro couples was selected at the same time. Some preliminary comparisons of the two

In 1963, 1,570 couples, 77 percent of the initial list, responded to a mail questionnaire and various follow-up procedures.[6] Information from these 1,570 couples in the Marriage Study is presented whenever it provides data which complements those of the Longitudinal Study on which we place primary reliance.

Neither sample, then, was drawn from the universe of all premarital conceptions or from a national population. The Marriage Study involves only white couples who have married, only premarital conceptions which resulted in a live birth, and only once-married wives under age forty-five. The premarital pregnancy rates cited are restricted to such couples and are the product of three distinct probabilities: the probability of a premarital conception, the probability of a conception resulting in a live birth, and the probability that a first marriage for the woman follows the conception. The Longitudinal Study covers three subsamples: the white couples who reached one of three distinctive points in the family-building cycle in July 1961, a first, second, or fourth birth. Therefore, in addition to the three probabilities involved for the Marriage Study, the Longitudinal Study involves the probability that the couple will reach the given parity with the marriage intact.

Determination of the pregnancy status at marriage involved first a check of the official marriage and birth records of the couples in each study to obtain exact dates and to correct any reporting errors by respondents.[7] The pregnancy status of each at marriage was then determined by a procedure which utilized both the length of time from marriage to first birth and the birth weight. All births occurring less than 196 days after marriage were considered premarital conceptions, and all occurring 301 or more days after marriage were considered marital conceptions. To assign births occurring from 196 to 300 days after marriage, Pratt used a combination of birth weight and length of gestation. The exact birth weight used as the cutting point for each week of gestation was chosen on the basis of other empirical data, so that the proportion of those wrongly considered as

groups appear in Pratt (1965*a*). The Marriage Study's sample of nonwhite couples is not included in the present analysis, because we do not have comparable data for the Longitudinal Study. This subsample was sufficiently distinctive both in response rates and other characteristics to require separate detailed analysis, which is being undertaken by Pratt.

[6] The group responding to the questionnaire somewhat underrepresents couples married at very young or very old ages, husbands with blue-collar jobs or with no job, husbands in the armed forces, and wives not working at the time of the marriage (Pratt 1965*b*, pp. 81–84).

[7] The necessary records were found for 93 percent of the Marriage Sample and for 94 percent of the first births of couples at second or fourth parity in the Longitudinal Sample. (First-parity couples were selected directly from the first-birth records, and the marriage record subsequently checked.) This procedure, as compared with calculations from survey responses, increased the number of those considered premaritally pregnant by 25 percent, although it also meant that some who would have been considered premaritally pregnant on the basis of dates given at the interview were shown not to have been.

PMP couples equaled approximately the proportion wrongly considered not PMP couples—that is, the procedure produces an approximate net error of zero.[8]

PMP couples, that is, those for whom the sequence of demographic events was conception, marriage, and birth, constituted 19 percent of the Marriage Study sample and 20 percent of the Longitudinal Study sample. The estimated very high premarital pregnancy rate among nonrespondents in the Marriage Study sample and allowance for "secret marriages," which have a very high premarital pregnancy rate also, might bring the total rate for that study to as high as 25 percent. These rates are roughly comparable to the 22 percent calculated by Christiansen (1963) from marriage and birth records of Tippecanoe County, Indiana.[9]

Multiple classification analysis, a type of multivariate analysis, is used to analyze the interrelation of the social backgrounds of the couples, their pregnancy status at marriage, and their economic and educational status after marriage. Briefly, this method is an extension of multiple regression analysis to situations in which the independent variables may be continuous variables divided into subclasses, or discontinuous variables such as religion. The procedure is analogous to standardization, and indicates the extent to which the original subcategory means are affected by the intercorrelations with other independent variables.[10]

PREMARITAL PREGNANCY AND STATUS OF COUPLES' PARENTS

The family background of couples with premarital pregnancies is of intrinsic interest as a check on the common idea that incidence of premarital conceptions is inversely correlated with the status of the couples' parents.[11]

[8] The rationale for this procedure and a comparison with four alternative methods is presented in Pratt (1965*b*).

[9] The nature of our sample leads to some underestimation of the rate, as previously indicated. However, the difference between our two rates (19 and 20 percent) and Christiansen's rate of 22 percent easily could be accounted for by differences in the definition of the sample and the nature of the procedures in their minor details. The range of difference is trivial considering these sources of difference in procedure. In Pratt's dissertation, an estimated PMP rate of 25 percent results when an adjustment is made for: (*a*) the known higher PMP rate among nonrespondents to the questionnaire and (*b*) "secret marriages" whose registration is confidential, except as to their total number. Such secret marriages are estimated to have had a PMP rate of more than 90 percent and to have accounted for 3 percent of all 1960 marriages and 13 percent of the PMP cases in the sample area. In carrying through our analysis, we are necessarily limited to data on the 77 percent of respondents in the Marriage Study from whom questionnaire responses were obtained. The omission of the nonresponses and the "secret marriages" could account for some differences between the longitudinal and marriage samples. While nonrespondents to the questionnaire are likely to have been of lower status than respondents, this probably would be balanced to some extent by higher status of those involved in the "secret marriages."

[10] The rationale and procedures are discussed in Morgan et al. (1962, appendix E).

[11] The idea of an inverse relationship has some support from several empirical reports of the low status of couples with premarital pregnancies. For example, in Christiansen's

More important, however, is its salience in assessing factors contributing to the couple's current economic situation. For example, the PMP couples in the Detroit Longitudinal Study had an average of $1,500 less income in 1961 than the other couples. Other measures of the economic situation also placed the PMP couples at a substantial disadvantage. The economic disadvantage of the premaritally pregnant was found in our previous study for those who had four children as well as for those who had only one. The crucial question here is whether the low economic status of the PMP couples might simply reflect the fact that they came from low-status families and, therefore, began in a disadvantaged position. Another possibility is that the PMP couples are at an economic disadvantage because they get less help than other couples at the outset of marriage, either because their relatives are also disadvantaged or because of the stigma attached to the premarital pregnancy.

One of the clearest results of the present analysis is that the disadvantaged economic position after marriage of the premaritally pregnant did not result from low-status familial backgrounds, as measured by the education and occupation of the fathers of either husband or wife. There is a curvilinear relationship between the premarital pregnancy rates and the status of the couples' parents in the Longitudinal Study for the sample as a whole and for each parity.[12] The highest percentage of PMP couples is for those whose parents are of middle status. This relationship is evident whether the parents' status is measured by the education, occupation, or decile occupation ranking [13]of the father of either the husband or the wife (table 1) The differences for education are particularly marked, with premarital pregnancy rates of 23.8 percent among wives whose fathers had a high school education, 17.2 percent for those with only grade school education, and 12.3 percent for those who attended college. Differences are greater for education than for occupation, and greater for the wife's father than for the husband's father.[14]

These results mean that if PMP couples are compared with others as to the average education and occupation of their fathers, the low average

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study (1963) using marriage and birth records, 4.3 percent of the women whose husbands had professional occupations, but 16.0 percent of those whose husbands were classified as laborers, were premaritally pregnant. Similar inferences can be made from studies of unwed mothers based on records of public agencies, and from studies of class differences in sexual norms, particularly the Kinsey reports. However, these studies rely on the characteristics of the couples, not of their parents.

[12] The relationships found at each parity are similar to those for the sample as a whole, unless an exception is noted.

[13] The decile rank refers to the occupation's Population Decile Scale value (O. D. Duncan 1961)

[14] There is some reason to believe that illegitimate births also may not be inversely related to familial status of mothers, as is commonly supposed. However, the samples used in studies of illegitimacy have been so small and so biased in their selection that it is difficult to know just what populations they represent, as is indicated in the title of an article by Vincent (1954).

status of the premaritally pregnant may be misleading, both because (the curvilinearity of the relationship and the distribution of backgroun status in the population.

In the Marriage Study, also, there is no inverse relationship betwe(parental background status and premarital pregnancy rates (see table 2 For the husband's father the relationship again is curvilinear, and for tl wife's there is, in fact, a positive correlation for education. In the Ma riage Study the highest percentage of premarital pregnancies was f(wives whose fathers had some college education. We are at a loss to explai

TABLE 1

PERCENTAGE PREMARITALLY PREGNANT, BY EDUCATION AND OCCUPATION OF FAMILY OF ORIGIN (LONGITUDINAL STUDY)

	PERCENTAGE PMP							
	Wife's Father				Husband's Father			
PARENTAL STATUS	Percentage	Deviation from Grand Mean	Adjusted* Deviation	Couples (N)	Percentage	Deviation from Grand Mean	Adjusted* Deviation	Couples (N)
Educational level attained.								
Grade school	17.2	−2.5	−2.9	530	18.6	−1.2	−0.9	556
Some high school	23.8	4.0	3.4	202	23.1	3.3	2.1	156
High school graduate	27.1	7.4	6.7	199	20.9	1.2	0.8	234
College	12.3	−7.5	−4.1	122	18.6	−1.2	0.0	97
Grand mean	19.8			1,053	19.8			1,053
Occupational classification:								
White collar	15.7	−4.1	−1.6	319	16.7	−3.1	−2.1	307
Craftsmen	24.4	4.7	3.9	343	21.3	1.5	0.5	277
Operative	21.1	1.3	−1.0	266	20.9	1.1	0.2	292
All other	14.4	−5.4	−4.6	125	20.9	1.2	2.4	177
Grand mean	19.8			1,053	19.8			1,053

* Adjusted for religion and husband's age at marriage.

this difference between the two sets of data. One obvious possible explana tion would be a high rate of early marital dissolutions among the bette educated premaritally pregnant wives. This was not found to be true in th first three years of marital experience of the Marriage Study sample, fo whom we had data on marital dissolutions. The positive correlation note persists even if we omit the marriages broken during the three years i which the marriages were studied. Of course, it is possible that selecti marital dissolutions occurred later.

The differences noted between the two samples should not obscure th fact that all of the measurements from both sets of data are consistent with hypothesis that there is no inverse relationship between familial back ground status and premarital pregnancy rates for those who marry. I each of the eight sets of data in tables 1 and 2, the highest premarita pregnancy rates are either among the middle- or highest-status groups an in no case is it among those of lowest educational or occupational stat backgrounds. Since we are dealing with married couples, the higher rate

of premarital pregnancy for couples of middle-status origins may result from (*a*) higher rates of conception before marriage, or (*b*) higher rates of marriage as a solution to a "problem" among those having a premarital conception,[15] or (*c*) some combination of these elements. We have no data to back up our guess that a higher rate of marriage after a pregnancy occurs is the more plausible explanation. Another reasonable argument is (*d*) that the highest-status groups might be in a better position to solve their problem by an induced abortion in order to avoid an unwanted marriage.

We have so far considered the gross facts about the social backgrounds of the premaritally pregnant, without taking other factors into account.

TABLE 2

PERCENTAGE PREMARITALLY PREGNANT, BY EDUCATION AND OCCUPATION OF FAMILY OF ORIGIN (MARRIAGE STUDY)

	Percentage PMP							
	Wife's Father				Husband's Father			
Parental Status	Percentage	Deviation from Grand Mean	Adjusted* Deviation	Couples (*N*)	Percentage	Deviation from Grand Mean	Adjusted* Deviation	Couples (*N*)
Educational level attained:								
Grade school	16.1	−3.2	−2.4	517	17.9	−1.4	−0.7	585
Some high school	18.9	−0.4	−1.7	371	18.1	−1.2	−2.5	315
High school graduate	20.7	1.4	1.0	362	22.5	3.2	2.4	324
College	23.6	4.3	4.8	225	15.0	−4.3	−2.7	207
Unknown	23.2	3.9	4.7	95	26.6	7.3	7.0	139
Grand mean	19.3			1,570	19.3	.		1,570
Occupational classification								
White collar	16.4	−2.9	−1.7	464	16.1	−3.2	−2.7	442
Craftsmen	20.0	0.7	0.5	410	21.1	1.8	1.2	298
Operatives	20.2	0.9	0.1	381	22.3	3.0	2.6	377
Other†	21.6	2.3	1.7	315	18.1	−1.2	−0.9	353
Grand Mean	19.3			1,570	19.3		..	1,570

* Adjusted for religion and husband's age at marriage.

† Includes unknown or uncodable occupations.

However, age at marriage and the religion of the couples obviously may affect these gross relations, in view of findings in previous studies about how these variables are related to fertility and economic status.

Age at marriage varies with socioeconomic background, and is related to premarital pregnancy.[16] Thus, earlier marriage may be an important part of the process which limits the economic status the PMP couples attain. Assumption of family responsibilities at an early age may decrease

[15] The position that marriages would follow such a pattern is developed by Cutright and Galle (1966). They argue that couples of lower status are more likely to have an illegitimate pregnancy but are less likely to marry than those of higher status because they are less likely to feel they have the resources to establish a household which meets the acceptable consumption standards of the time.

[16] For a more extended discussion of the relation between age at marriage and PMP, see Pratt (1965*b*, pp. 93–116).

the early educational and occupational opportunities of the young couple, depressing their later economic position. The PMP couples in both the Marriage Study and the Longitudinal Study were married at younger ages than the other couples in every social background stratum considered. The amount of the difference varied somewhat with background, but on the average in the Longitudinal Study. the age at marriage is less for the PMP couples than for others by 1.7 years for the husbands and 1.3 years for the wives. The Marriage Study results are similar. These age-at-marriage differentials, then, might explain the relationships of premarital pregnancy to either the social backgrounds of the couples or their characteristics after marriage. Since being a Catholic, and especially having a high degree of attachment to the Catholic church, is known to be related to fertility and to the age at marriage, this, too, should be taken into account.

Tables 1 and 2 contain data to test for each study whether age at marriage or religion affects the initial relationship between background status and premarital pregnancy rate. The percentage premaritally pregnant for each category of parental status is shown both as an absolute value and equivalently as a deviation from the percentage for the whole sample. These gross unadjusted values were the basis for our initial finding of higher premarital pregnancy rates for couples of middle or higher status. The "adjusted deviations" indicate, in addition, the differentials still remaining after adjustment by the multiple classification method for the effects of age at marriage and religious preference. A comparison of the "adjusted" and "unadjusted" deviations indicates that the initial relationships are still pronounced after both age at marriage and religious preference are taken into account.

To test further the hypothesis that the premaritally pregnant do not come primarily from low-status backgrounds, we introduced a number of other controls in analyses available in unpublished tables. For example, the number of generations the families of the couple have been in the United States could produce differing norms about courtship and marriage. The marital status of the couples' parents might affect their attitudes and their control of the behavior of their children. Adjustment for these factors, however, had little effect on the relationships observed. Nothing in the data from either the Marriage Study or the Longitudinal Study indicates that the incidence of premarital pregnancy is inversely correlated with the socioeconomic status of the families from which the PMP couples came.

HELP FROM RELATIVES

It is reasonable to argue that the PMP couples might be disadvantaged after marriage by the fact that they got less help from relatives than is customary for newly married couples. This might put them at a disadvantage financially and might lower their morale. However, the data in both of the studies (Marriage and Longitudinal) on which we are drawing

indicate that the PMP couples get more rather than less help from their parents and other relatives than the average couple.

In both studies, the wives were asked about any help they received from their families. The possibilities ranged from direct service such as baby sitting, help with housework, or special care when the last baby was born, to financial assistance in terms of loans or gifts or financial advice. Both the studies provide the best data about aid in the first years of marriage, and both indicate that the couples expecting a child at marriage received much help from their relatives.

Both in the Marriage and the Longitudinal studies, the PMP couples received as much help, and usually more help, than other couples in most comparisons. For the Marriage Study, the average number of kinds of help reported was as shown in table 3.

TABLE 3

HELP RECEIVED FROM RELATIVES (MARRIAGE STUDY)

	Average Number of Kinds of Help Received		
Pregnancy and Spacing Status	Unadjusted Average	Adjusted Average*	Couples (*N*)
Premaritally pregnant	3 1	3.0	255
Not premaritally pregnant and interval from marriage to first child was:			
Less than 12 months	2 8	2.7	317
More than 12 months	2 5	2 5	523
No child 3 years after marriage	1.3	1.4	272

* Adjusted for wife's age at marriage, comparative educational status of fathers of wife and husband, and whether parents lived in Detroit area.

Obviously, the average number of kinds of help received was inversely related to the interval from marriage to first birth, with the PMP couples getting the most help by this criterion. Having a child and having it early brought forth the support of relatives, and PMP status was no deterrent to this kind of support. Those who did not have a child at all after three years of marriage in this sample needed and received less help of these kinds. Taking into account several pertinent variables made little difference in the results.

In the Longitudinal Study, too, the PMP couples reported more than the average number of instances of financial help from relatives. This was true not only after a first birth but also after a second and a fourth, and after taking into account the same constellation of other pertinent variables as in the Marriage Study.

Thus, the PMP couples appear to receive from their relatives at least as much help in general, and more on the financial side, than other couples. Apparently, however, the assistance received by the PMP couples was not enough to overcome their economic disadvantages occurring early in marriage.

COMPARISON OF BACKGROUND STATUS OF HUSBAND AND WIFE

If premarital pregnancy itself precipitates some marriages that would no have taken place without the pregnancy, it is a plausible hypothesis tha the PMP couples will be more discrepant in their own backgrounds thai other couples.[17] Several sets of data suggest that this is the case. In th Longitudinal Study, for example, the correlation between the decile oc cupational ranks of the wife's and husband's fathers for the non-PMI couples (.22) is higher than for the PMP couples (.11). The percentag premaritally pregnant is almost twice as great among couples reportin different religious preferences as among those with the same preferences—3 compared with 18. Similar differences exist for such other backgroun

TABLE 4

PERCENTAGE PREMARITALLY PREGNANT, BY DIFFERENCES IN PARENTS' EDUCATIONAL LEVEL (MARRIAGE STUDY DATA)

	Comparison of Education of Wives' and Husbands' Fathers		
Parents' Education	Parents Equal	Wife's Father Higher	Husband's Father Higher
	Percent premaritally pregnant:		
Grade school	16 0	. .	
High school	20 7	.	
College	15.9	. .	.
Grade school vs. high school	. . .	17.5	16.7
High school vs. college	. . .	24 5	16 9
Grade school vs. college	. . .	31.3	10 4
Total	18.4	20.1	16.1

factors as education of fathers and the couple's own educational attain ment.

The relationship between premarital pregnancy and the difference ir father's education is particularly striking for couples in the Marriag Study (table 4). Among couples whose fathers had the same education the incidence of premarital pregnancy follows the curvilinear pattern dis cussed earlier. It is greatest when both fathers had a high school educatior (20.7 percent), and lower (16 percent) when both had either a grade schoo or college education.

Among those with differing educational backgrounds, however, the per centage premaritally pregnant is distinctly highest when the wife's fathe has a higher education than the husband's father, and the rate increase with the educational discrepancy. For example, if the husband's father di not go beyond grade school, the premarital pregnancy rate is 16 percen

[17] The tendency for husbands and wives to have similar backgrounds is discussed ir Warren (1966).

if the wife's father had about the same education, 18 percent if he went on to high school, and 31 percent if he had some college education.

If the wife's father has less education than the husband's father, the differences are reversed, and especially large at the extremes. If the husband's father attended college, the percentage premaritally pregnant was only 10 if the wife's father had only a grade school education, but 17 if he had a high school education. In general, husbands whose fathers are well educated have lower than average premarital pregnancy rates, but the rate is particularly low if the wife's father had very little education and the husband's father had much.

The Longitudinal Study sample is too small to permit such detailed educational cross-classifications for the fathers. However, a gross comparison gives similar results. If the fathers had different educational backgrounds, the premarital pregnancy rate is significantly higher than the rate for the couples whose fathers had similar educations, 22 percent compared with 18 percent.

TABLE 5

ZERO-ORDER CORRELATION BETWEEN NUMBER OF YEARS SCHOOLING OF HUSBAND AND WIFE

Parity	Premaritally Pregnant	Not Premaritally Pregnant
First	33	.59
Second	43	.54
Fourth	.14	.40
Total	33	.53

Marriages in which a pregnancy preceded the wedding are also selective of couples whose own education is dissimilar. The correlation between the number of years of school completed by husband and wife is lower for the PMP group than for the non-PMP group at each parity and for the total Longitudinal Study sample. The zero-order correlations are as shown in table 5.

All of these findings on discrepant backgrounds are consistent with two quite different interpretations. They may reflect either a difference in premarital conception rates or a difference in the proportion of premarital conceptions followed by a marriage. The second possibility seems most reasonable to us. The pressures for marriage between persons of different educational attainment or background are undoubtedly greater if a premarital pregnancy occurs. These pressures are probably stronger for the female than the male, and probably are more likely to lead to marriage if the female's family has the power and influence that goes with higher status. Where the husband's family has this status advantage, we speculate that it is more likely to be used to avoid a marriage which is likely to damage his career chances.

PREMARITAL PREGNANCY AND ECONOMIC POSITION

The PMP couples are at a substantial economic disadvantage after marriage. The difference between them and the rest of the Longitudinal Study sample at the time of interview is evident for every measure of status and economic position considered, and it remains even after the birth of the fourth child. The average family income in 1961, for example, was $1,200 less for the PMP couples than for the total sample, and their relative asset position was even poorer. This wide margin of difference was demonstrated in our earlier analysis of the Longitudinal Study data.[18] In the present

TABLE 6

HUSBAND'S OCCUPATIONAL DECILE RANK, BY LENGTH OF FIRST BIRTH INTERVAL

Length of First Birth Interval	Husband's Occupational Rank at First Interview			
	Mean Decile	Deviation from Grand Mean	Adjusted Deviation*	Couples (N)
All parities:				
PMP couples........	5 50	− 76	− 62	208
Non-PMP couples:				
Less than a year	6.58	.33	31	342
One year or more....	6 34	09	04	503
Grand mean.......	6 25	..	...	1,053
Fourth parity:				
PMP couples......	5 44	−.78	−.62	66
Non-PMP couples:				
Less than a year......	6 59	37	.27	116
One year or more ...	6 28	.05	.07	152
Grand mean	6.22	.	...	334

* Adjusted for husband's father's education, husband's age at marriage, and duration of marriage

analysis, we consider additionally (1) whether the PMP couples are in a poorer position than other couples having their first child quickly after marriage, and (2) whether the economic disadvantage after marriage results from differing status origins, earlier age at marriage, or the duration of the marriage at the time of interview. From this point on, our analysis is confined to the Longitudinal Study, since the Marriage Study did not include data on assets.

Tables 6–8 show that for couples at three different stages of family life, the PMP couples were in an unfavorable economic position compared with others, whether the measure is husband's occupational rank, his income, the family income, or the family assets.[19] Furthermore, on all these indicators

[18] The effect of patterns of childspacing on the family's economic position is discussed in Freedman and Coombs (1966*b*).

[19] The asset measures used in this analysis include: equity in a house; savings accounts in banks, credit unions, or savings and loan associations; corporate stocks or bonds; paid-up cash value of life insurance; real estate in addition to own house. Including the value of cars makes little difference in the relationships observed, so it was omitted in

their position was not only divergent from the rest of the sample, but was also substantially lower than that of couples conceiving and having a child within the first twelve months of marriage. For most of these measures, having a child at this early period of marriage is associated with a distinct economic disadvantage, but if the child is conceived premaritally,

TABLE 7

INCOME OF HUSBAND AND OF FAMILY IN 1961, BY LENGTH OF FIRST BIRTH INTERVAL

	Husband's Income			Family Income			
Length of First Birth Interval	Mean Income	Deviation from Grand Mean	Adjusted* Deviation	Mean Income	Deviation from Grand Mean	Adjusted* Deviation	Couples (N)
First parity							
PMP couples	$3,400	$−1,450	$−1,430	$4,170	$−1,500	$−1,810	60
Non-PMP couples:							
Less than one year	4,820	30	− 240	5,700	10	− 49	129
One year or more	5,370	520	670	6,200	510	980	175
Grand mean	4,850		.	5,690		..	364
Second parity:							
PMP couples	4,850	− 970	− 650	5,070	− 970	− 600	82
Non-PMP couples:							
Less than one year	5,820	− 10	− 10	5,990	− 50	− 30	97
One year or more	6,280	450	300	6,520	480	300	176
Grand mean	5,830			6,040		..	355
Fourth parity.							
PMP couples	5,450	−1,180	− 560	5,560	−1,230	− 580	66
Non-PMP couples.							
Less than one year	6,700	70	− 10	6,820	30	− 50	116
One year or more	7,100	470	250	7,300	510	290	152
Grand mean	6,630			6,790	..	. .	334

* Adjusted for husband's father's education, husband's age at marriage, and duration of marriage.

TABLE 8

ASSETS IN 1961, BY LENGTH OF FIRST BIRTH INTERVAL

Length of First Birth Interval	Mean Value of Assets	Deviation from Grand Mean	Adjusted* Deviation	Couples (N)
All parities:				
PMP couples	$3,110	$−2,220	$− 990	208
Non-PMP couples:				
Less than one year	5,090	− 240	− 100	342
One year or more	6,410	1,080	340	503
Grand mean	5,330	.		1,053
Fourth parity:				
PMP couples	3,890	−3,290	−1,570	66
Non-PMP couples:				
Less than one year	7,060	− 130	80	116
One year or more	8,710	1,530	620	152
Grand mean	7,180	. .	...	334

* Adjusted for husband's father's education, husband's age at marriage, and duration of marriage.

summing up the assets, since the actual net equity in the car was not known. The admittedly crude total asset measure may not represent accurately the absolute value for each family, but we believe that the averages represent proper orders of magnitude for the groups of families considered.

the disadvantage is much greater than would be expected if the additiona few months before having a child were all that were involved. There is then, a large and apparently qualitative difference associated with the fac of a premarital conception.

The adjusted deviations given in tables 6–8 indicate what the economi differences are when the additional factors of parental background (as measured by father's education), the husband's age at marriage, and the length of time the couple has been married are controlled through multiple classification analysis. Each of these factors affects economic position and might account for the poor economic position of the premaritally pregnant However, our analysis indicates that the economic disadvantage of the

TABLE 9

RELATION OF FIRST BIRTH INTERVAL TO HUSBAND'S AGE AT MARRIAGE

	LENGTH OF FIRST BIRTH INTERVAL		
		Non-PMP	
HUSBAND'S AGE AT MARRIAGE (YEARS)	PMP (%)	Less than One Year (%)	One Year or More (%)
16–19	27	11	10
20–22	43	34	37
23+	30	55	53
Total	100	100	100
Number of couples	(208)	(34)	(503)

premaritally pregnant cannot be attributed in any large measure to these other variables. The size of the disadvantage for the premaritally pregnan is reduced by the adjustments for these other variables. In every compari son, however, there remains a large adverse difference in economic positio for the PMP couples, even after these adjustments are made. This dis crepant position is still marked at the fourth parity, although for most couples at this family-building stage the premarital pregnancy occurred a considerable number of years earlier.[20]

PREMARITAL PREGNANCY AND EDUCATION

Husbands in PMP marriages have had less education than the other hus bands, perhaps because in some cases the pregnancy and marriage inter rupted their education. The premaritally pregnant are much more likely than others to be married at an early age. The husbands in the PMP group are on the average 1.7 years younger at marriage than others, and many of them were so young that the marriage may have interrupted their educations. In table 9, the distributions of age at marriage show that for

[20] The relationships observed for the sample as a whole also characterize each parity considered.

the non-PMP couples the interval to the first birth is not related to the husband's age at marriage. Those who were premaritally pregnant, however, were much more likely than others to be married in their teens. For this group a plausible causal sequence for many must be:

premarital pregnancy → early age at marriage → less education.

A premarital pregnancy is associated with the probability that the husband was a high school dropout: 37 percent of the husbands had some high school but less than enough for graduation, compared with 18 percent of those whose wives were not premaritally pregnant (see table 10, section A). Husbands of non-PMP wives were three times more likely to have finished college than those of PMP wives. Among those who had any college

TABLE 10

NUMBER OF YEARS OF SCHOOL COMPLETED BY HUSBAND, BY FIRST BIRTH INTERVAL AND HUSBAND'S AGE AT MARRIAGE (PERCENTAGE DISTRIBUTIONS)

Length of First Birth Interval	Years of School Completed by Husband: Percentage Distribution: Less than 9	9–11	12	13–15	16 or More	Total	Couples (*N*)
A. All Couples							
PMP couples	8	37	34	14	7	100	(208)
Non-PMP couples:							
Less than one year	6	13	41	20	20	100	(342)
One year or more	7	21	34	18	20	100	(503)
Total	7	22	36	17	18	100	(1,053)
B. Husband 16–19 Years Old at Marriage							
PMP couples	4	50	39	5	2	100	(56)
Non-PMP couples:							
Less than one year	22	24	40	14	0	100	(37)
One year or more	8	45	29	18	0	100	(57)
Total	10	41	36	12	1	100	(144)
C. Husband 20–22 Years Old at Marriage							
PMP couples	3	34	37	20	6	100	(90)
Non-PMP couples:							
Less than one year	2	17	50	20	11	100	(117)
One year or more	6	22	40	19	13	100	(187)
Total	4	23	42	20	11	100	(394)
D. Husband over 22 Years Old at Marriage							
PMP couples	19	31	24	13	13	100	(62)
Non-PMP couples:							
Less than one year	5	9	36	20	30	100	(188)
One year or more	7	16	30	17	30	100	(265)
Total	8	15	31	18	28	100	(515)

training (more than twelve years of schooling), the husband graduated in only a third of the PMP couples but in half of the others.

Although family background is frequently a critical factor in becoming a school dropout (B. Duncan 1965), the premaritally pregnant are not disproportionately from families of low education or occupational status, and their own educational disadvantage does not stem from this aspect of their parents' situation. This is shown in table 11. After an adjustment has been made allowing for differences in the education of their fathers, the husbands in PMP marriages attained nearly a year less schooling than the average, and 18 percent fewer completed high school.

The syndrome of early marriage and meager education is not characteristic only of the premaritally pregnant. The two factors are closely associated also among those whose children were conceived after marriage. If the husband is in his teens when he marries, there is about a 50-50

TABLE 11

HUSBAND'S EDUCATION, BY LENGTH OF FIRST BIRTH INTERVAL

Length of First Birth Interval (All Parities)	Number of Years of Education			Percentage Completing High School			Couples (N)
	Mean	Deviation from Grand Mean	Adjusted* Deviation	Mean	Deviation from Grand Mean	Adjusted* Deviation	
PMP couples	11.4	–.9	–.9	54.3	–16.9	–17.5	208
Non-PMP couples:							
Less than one year	12.6	.4	.3	80.7	9.5	8.7	342
One year or more	12.4	.1	.2	71.8	.5	1.4	503
Grand mean	12.3			71.2			1,053

* Adjusted for education level of husband's father.

chance that he will not complete high school, regardless of whether the marriage was preceded by a pregnancy. However, these early marriages are much more common among the premaritally pregnant. More than one in four husbands in PMP couples was less than twenty years old at the time of marriage, but one in ten among the non-PMP was that young when married. Thus the curtailment of education by early marriage is a more significant factor among the premaritally pregnant.

The interlocking effect of early marriage and interrupted high school education, however, does not account entirely for the lower educational achievement among the husbands whose wives were pregnant at marriage, since only about 25 percent of the PMP husbands were under age twenty at marriage. Marriage among the PMP after the husband is twenty or older appears to be selective of those with less education (see table 10, sections C and D). At this age, dropping out of high school because of a "forced" marriage does not seem a reasonable explanation. Yet, fewer of the PMP have finished high school, particularly among the husbands marrying at age twenty-three or more. There is some evidence of interrupted college among the husbands who marry at twenty to twenty-two years of age; 20 percent of the PMP who started college completed their

degrees, compared with 40 percent of the others. But the lower educational level of the premaritally pregnant who marry in their twenties seems to derive chiefly from a selection process which results in a higher probability of premarital pregnancy among the less educated.

The lower educational attainment of the husbands in PMP marriages thus apparently stems from two major influences. (1) Among one group, premarital pregnancy may lead to dropping out of school because of the necessity to marry early. The premaritally pregnant who marry young are no different from others marrying young in having a poor education, but the premaritally pregnant are much more likely to be married young. (2) Many of the premaritally pregnant who marry at later ages also appear to be school dropouts, but the timing indicates that for most older couples, the premarital pregnancy took place after the husband left school. This second factor is important, since almost one-third of the husbands were over twenty-two when married. This selection of the premaritally pregnant from among the low-education strata leads to an inference that there are factors predisposing to little education, or resulting from it, which are also conducive to premarital pregnancy. These factors may also affect future economic achievement, quite apart from the influence of inadequate education itself. Curtailment of education by premarital pregnancy is more prevalent for the wives than for the husbands, but we have stressed the experience of the husbands, because of the special linkage to their economic situation.

PREMARITAL PREGNANCY, EDUCATION, AND ECONOMIC DISADVANTAGE

It is reasonable to suppose that the economic disadvantage of the PMP couples may be partly a result of the husband's poor educational preparation, regardless of whether the pregnancy was a cause of lesser schooling. More education is strongly associated with better economic status, irrespective of whether the couple had a premarital conception or not (see table 12). Differences in economic status between the two groups are substantially less within most education categories than they are for the sample as a whole.

Nonetheless, at each educational level the PMP couples were economically less well off in 1961 than other couples, whether measured by occupational status, family income, or accumulated assets. Having the same education reduces, but does not eliminate, the economic gap between the two groups. The economic disadvantage of the premaritally pregnant at every educational level does not result from differences in family background or in the husband's age and its relation to career line development. We took the influence of these factors into account in multivariate analyses (unpublished tables), and found little shift in observed differences.

In these various analyses it is clear that the disadvantage of the premaritally pregnant in the course of their marriage history is greatest with respect to asset accumulation. The premaritally pregnant, to be sure, have

less income from which to accumulate savings, but the large difference in asset position remains even after making allowance for income differences. We speculate that many of the premaritally pregnant get off to a poor start as a result of early or, at least, unexpected marriages, so that the couple has to support a family before there has been time to accumulate any savings. The low income of the husbands and the lesser opportunity for the wife to work in the early months of the marriage all would combine to make the early asset position poor. This initial unequal start was not overcome between marriage and the initial period of study, although some

TABLE 12

AVERAGE OCCUPATIONAL RANK, 1961 FAMILY INCOME, AND 1961 ASSETS, BY HUSBAND'S EDUCATION AND STATUS AT MARRIAGE

Pregnancy Status at Marriage	Husband's Education: Less than High School Graduate	High School Graduate	Some College	College Graduate	Total
	Husband's Occupational Decile Rank at First Interview				
Premaritally pregnant	4 3	5 9	7 1	8 5	5.5
Not premaritally pregnant. . .	4 7	6 0	7 3	8 6	6 4
Percentage difference*.	9	2	3	1	16
	Family Income in 1961				
Premaritally pregnant. . .	$4,410	$5,040	$5,760	$6,710	$4,970
Not premaritally pregnant .	5,080	6,000	6,510	8,820	6,450
Percentage difference*. . . .	15	19	13	32	30
	Assets in 1961				
Premaritally pregnant .	$2,390	$3,370	$3,290	$4,530	$3,110
Not premaritally pregnant . .	4,040	5,750	5,710	8,470	5,880
Percentage difference*. . .	69	54	74	87	89

* Difference as a percentage of the value for the premaritally pregnant.

couples already had four children when we interviewed them. The differentials in assets are far greater than those in occupational status or income, no matter which educational level is being considered. Either the premaritally pregnant have difficulty in overcoming their initial disadvantage or they are less interested in accumulating such assets than other couples with similar occupation, income, or education.

To what extent do the premaritally pregnant gradually "make up" for their economic disadvantage? We can provide only a partial answer to this question. The economic data analyzed thus far were collected in 1962 about seven to nine months after the birth of the couples' first, second or fourth child. Almost all of the couples have been reinterviewed three times since then. The most recent set of interviews, late in 1966, provides reports on incomes and assets four years later than those we have been discussing

r the 947 couples still eligible and participating in the study in 1966. s table 13 indicates, there have been substantial upward shifts in income nd in assets for both the PMP and the other couples at every educational vel during this four-year period.

Overall, the percentage differences in income and assets between the remaritally pregnant and the others have diminished considerably during he four-year period. However, the premaritally pregnant remain at a substantial economic disadvantage, especially with respect to assets. For the hole sample, those not premaritally pregnant had a 50 percent advantage the amount of accumulated assets in 1966. Further, the premaritally regnant had less assets at every educational level. Income differences are

TABLE 13

VERAGE FAMILY INCOME AND TOTAL ASSETS IN 1961 AND 1965, BY EDUCATION OF HUSBAND AND BY PREMARITAL PREGNANCY STATUS

	Family Income in 1961			Family Income in 1965			Couples* (N)	
Husband's Educational Attainment	PMP	Non-PMP	Percentage Difference†	PMP	Non-PMP	Percentage Difference†	PMP	Non-PMP
ess than high school graduate	$4,490	$5,200	16	$ 8,150	$ 8,810	8	75	181
igh school graduate	5,140	6,050	18	9,660	9,160	− 5	58	275
ome college	5,700	6,550	15	10,810	11,040	2	27	150
ollege graduate	6,850	8,860	20	12,540	13,550	8	13	168
Total	5,060	6,560	30	9,400	10,440	11	173	774
	Total Assets in 1961			Total Assets in 1965				
ess than high school graduate	$2,480	$4,280	73	$ 5,790	$ 8,260	43	75	181
igh school graduate	3,995	5,820	45	8,150	10,250	26	58	275
ome college	2,990	5,780	93	9,160	11,340	24	27	150
ollege graduate	4,725	8,490	80	12,560	16,790	34	34	168
Total	3,240	6,030	86	6,620	11,400	72	173	774

* Comparisons are based on only the couples remaining in the sample at the time of the fourth interview.
† Difference shown as a percentage of the value for premaritally pregnant.

maller but persistent. The overall economic disadvantage of the premaritally pregnant group is greater than that evidenced at any particular educational level, because, although a few have upgraded their education in ecent years, most of the premaritally pregnant have the poor educational reparation with which they began.

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Family Localism and Social Participation

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The hypothesis of the social participation career has two main sources of variation, occupational career and family life cycle. This paper explores the effects of stage in family life cycle on social participation. It is concluded that high social participation is facilitated by marriage but inhibited by the family. The form of participation consistent with the family is home localism.

In this paper I attempt a limited empirical exploration of part of the hypotheses which Wilensky (1966, pp. 306–19) has put forward to explain social participation patterns as they vary throughout an individual's life. He states that occupational involvement gives rise to a concomitant involvement in that social and organizational life which operates in a wider arena than is to be found in a "family-home localism." By "family-home localism" is meant a pattern of social participation which is limited to interaction with neighbors, kin, and friends. He also asserts that the high point in social participation is delayed until middle age due to the depressing effect of a necessarily intense involvement in the family while young children are present. The family life cycle part of these hypotheses is explored here.

There are few studies relating family life cycle to social participation. Hausknecht (1962, p. 35) inferred from participation differences between married and single persons "that as individuals assumed career and family responsibilities there was an increase in the rate of membership in voluntary associations." His data show a curvilinear relationship between age and frequency of membership. Yet, as Lansing and Kish (1957) have shown, age is a very rough measure of stage of the family life cycle and suppresses many of the interesting relationships between family stage and other variables.

Schmidt and Rohrer (1956) found a few weak tendencies in their study. "No family type (stage) was related to the husband's membership involvement in organizations" for urban families. However, comparing mothers of preschool-age children to those of school-age children, "the wife tended to be reported as a member in some formal organization (p = .08) as the family moved into the stage of school-age children." Sussman (1955) reported an increase by both spouses in community participation, and especially joint participation, after the children have left home. The relationships among the several variables which relate social participation to life cycle are clarified below.

RESEARCH PROCEDURES

The data are derived from the membership and records of a large outd leisure organization which operates in the Pacific Northwest and is cente in a Standard Metropolitan Statistical Area of a population of some 821,0 The activities of the organization consist of mountain climbing, skiing, door programs, hikes, picnics, conservation, and a few others. Data certain kinds of participation were gathered from organizational records all members. Data on other kinds of participation were taken from a qu tionnaire sent to the total membership. The return rate was 78.9 perce providing a usable sample of 1,115. Although the data are from only o

TABLE 1

MEAN ANNUAL ATTENDANCE OF MARRIED MEMBERS BY SEX AND AGE OF YOUNGEST CHILD*

	Age of Youngest Child							
	0–5 Years			6–17 Years				
Sex	$\bar{X}$	SD	N‡	$\bar{X}$	SD	N‡	t	p†
Males	5.17	8 92	137	7.38	9 65	168	2 07	0[illegible]
Females	3 29	5.06	48	6 78	8.99	58	2 37	0[illegible]

* Annual individual attendance is the sum of the attendance of a member at any of the eight differ types of activities sponsored by the association during 1966 Attendance in five of these activities is measu by self-reported frequency; attendance in the other three is taken from associational records

† Two-tailed .05 tests.

‡ Ns vary from table to table due to varying completeness of response.

leisure organization, the fairly substantial size of the sample permits statistical, nonimpressionistic treatment of several of the dynamics i volved in social participation.

RESULTS AND DISCUSSION

Table 1 shows an increase in the rates of adult attendance at association events as the family moved beyond the stage of preschool children.[1] O findings differ from those of Schmidt and Rohrer (1956) in that the latt report a significant difference only for females whereas our data show si nificant differences for both sexes. However, the values of Ω^2 associat with table 1 are 0.01 and 0.04 for females and males, respectively. Thus, suggest that the very large sample sizes for males may have resulted picking up a difference which, although significant, is trivial. Additionall it is suggested that the relationship between participation and age youngest child is curvilinear. Different cutting points were examined on t

[1] All of the distributions of attendance deviate from normality by being positively skewe However, for large samples, the results of the nonparametric randomization test close approximate those of the parametric t-test. Thus, for large samples, the t-test may used as a nonparametric significance test (cf. Siegel 1956, pp. 154 ff.).

age-of-youngest-child variable. Using cutting points above the age of approximately six years results in nonsignificant differences and little increase in the rates of attendance.

However, the variable "social participation" is commonly measured by either number of memberships in voluntary associations or by attendance at meetings. The data at hand urge that the effects of stage in the family life cycle on these two measures differ. Membership is not attendance. Table 2

TABLE 2

PERCENTAGE OF MARRIED MEMBERS WITH MEMBER-SPOUSE BY SEX AND AGE OF YOUNGEST CHILD

Sex	Age of Youngest Child: 0–5 Years	6–17 Years	χ^2	df	p*
Males	24	23	0 12	1	N.S.
100% (N)	(143)	(180)			
Females	67	65	0 06	1	N.S.
100% (N)	(49)	(60)			

* Two-tailed tests.

TABLE 3

PERCENTAGE OF MARRIED MEMBERS WITH MEMBER-SPOUSES BY SEX AND PRESENCE OF CHILDREN*

Sex	Presence of Children: Children	No Children	χ^2	df	p
Males	24	37	10 78	1	01
100% (N)	(322)	(182)			
Females	66	70	0 27	1	N.S.
100% (N)	(109)	(95)			

* Only children under eighteen years of age and living in the household are considered "present."

shows the relationship between age of youngest child and whether a member's spouse is also a member. It is evident from this table that if having young children obliges parents to quit or not to join, they affect both sexes uniformly. Yet, comparing those members with children to those without children, a different relationship emerges. Table 3 shows that the presence of children obliges wives to quit or not to join, but does not have such an effect upon husbands. Thus, it seems that the mere presence of children, as opposed to the age of children, has an inhibiting effect upon the wife's membership. If, however, she retains her membership despite the presence of children, her attendance is more inhibited while she still has preschool-age children.

It appears that the effect of having a spouse who is also a member has further consequences for an individual's attendance. Table 4 presents mean

attendance for married persons by sex, presence of children, and presence a spouse who is also a member. It is evident that the most important varial in this table is presence of a member-spouse. There was no significant ma effect due to the presence of children nor was the interaction significan Thus, joint attendance gives rise to high attendance.[3]

TABLE 4

MEAN ANNUAL ATTENDANCE OF MARRIED MEMBERS BY SEX; PRESENCE OF CHILDREN AND PRESENCE OF MEMBER-SPOUSE

A. MALES

PRESENCE OF CHILDREN	PRESENCE OF SPOUSE: With Spouse $\bar{X}$	With Spouse SD	With Spouse N	Without Spouse $\bar{X}$	Without Spouse SD	Without Spouse N
With child	9.62	13.52	69	5.51	7.58	237
Without child	11 23	14 67	64	5 70	9.65	108
	SS		*df*	MS	*F*	*p**
Total	52,209 38		477	.	.	
Between columns	2,086 99		1	2,086 99	19 77	01
Between rows	42 84		1	42 84	0.41	N.S
Interaction	46 12		1	46 12	0 44	N.S
Error	50,033 43		474	105 56	..	

B. FEMALES

PRESENCE OF CHILDREN	PRESENCE OF SPOUSE: With Spouse $\bar{X}$	With Spouse SD	With Spouse N	Without Spouse $\bar{X}$	Without Spouse SD	Without Spouse N
With child	6 60	8 72	70	2 47	3.73	36
Without child	6.64	8 62	61	3 65	6 59	26
	SS		*df*	MS	*F*	*p**
Total	12,060 94		192	.	.	
Between columns	554 09		1	554 09	9.12	01
Between rows	7 66		1	7 66	0 13	N.S.
Interaction	13 46		1	13.46	0.22	N.S
Error	11,485 73		189	60 77	. .	.

* Two-tailed .05 tests.

[3] The distributions of attendance used in the *F*-tests are nonnormal, all being positivel skewed. However, when using the fixed-effects model with large *N*s and independe observations, the assumptions of normality and equal variance may be fairly severel violated (cf. Hays 1963, p. 408). Also, since the values of *F* for rows and interaction d not approach significance, only the columns effect might be doubted. But since *F* = *t* the reader may (with appropriate pooling of *SS* and *df*) interpret the columns test of sig nificance as a nonparametric use of the *t*-test (see n. 1).

[4] Of course, the finding that (for both sexes) those with member-spouses participat

SUMMARY OF FINDINGS

Figure 1 graphically summarizes the somewhat involved set of relationships found above. Children have an inhibiting effect upon the social participation of parents. The effects differ by sex and by whether participation is measured in terms of associational membership or in terms of attendance at meetings. Age of children has either a uniform effect on the membership of both sexes, or has no effect. However, the presence of young children in the family has an inhibiting effect upon the wife's attendance.

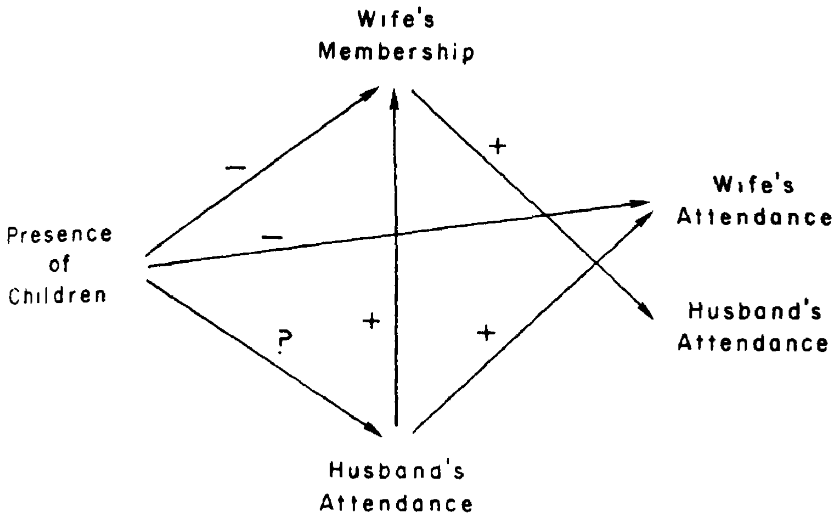


FIG. 1.—Causation patterns between attendance, membership, of spouse, and presence of children (− = inhibiting effect; + = facilitating effect).

The presence of children has a depressing effect upon the membership of wives, but not of husbands. Additionally, the presence of children has a direct and an indirect effect upon the husband's attendance. The direct effect serves to mildly depress his attendance. The indirect effect is mediated through the presence or absence of the wife as a joint member. The indirect effect is much larger than the direct.

DISCUSSION

One potential major objection to generalizing from the above findings to social participation generally, or, at least, to a large segment of it, is that interest and initiative in the particular type of activities carried on by the

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much more than those without does not guarantee that these members attended the association's gatherings with their spouses. However, for those members who have member-spouses, the correlation between spouses' participations is 0.71 ($N = 114$ couples). Thus, the inference of joint attendance at the same meetings seems most reasonable.

organization studied may be sex linked. Thus, a look at the right-ha marginals of table 3 shows not only that husbands are members more oft than wives but that a wife's membership is strongly contingent upon I husband being a member. Since, hypothetically, males may be more int ested in outdoor recreation than females, this interest might account their attendance and membership being relatively immune to variations life-cycle stage.

The hypothesis that outdoor recreation is of substantially greater inter to males than to females may be tested by examining the membership a attendance of single members. Fifty-four percent of the single members a male (total $N = 298$). This proportion does not differ significantly from fifty-fifty split. Also, if we look at the attendance of single members, t mean annual attendance for males is 9.4 events and that for females is 1((total $N = 298$; $t = 0.39$). Again, the difference is not significant. Th relatively high interest and participation in the associations' activities is n linked to the role of male, but to the role of husband.

Komarovsky (1964, pp. 311–23) has reported some evidence that jo social participation among marrieds is more common among the bett educated. This relationship was explored in the data, but no associati was found. Indeed, within the data, attendance was not found to be relat to either education or occupation. Two reasons may explain this. Fir since 90 percent of those reporting occupation were white-collar worke the class variation within the data is quite limited. Second, those blu collar workers who were members were primarily the elite of the blu collar group, typically having skilled occupations. Thus, we may not in mediately conclude from these data that the phenomenon of joint soci participation is unrelated to social class.[4]

We suggest that the husband may fairly generally be the initiator social participation and that the level of participation turns on wheth the couple participates in a given activity jointly. Babchuk (1965) foun that, in informal social participation, most of the friends of middle-cla couples were originally friends of the husband. This is not to deny th there are some associations in which the wife may be the initiator Th Parent-Teachers' Association is a good example of this type. Rose (196 pp. 411–14) reports that membership and attendance in the P.T.A. is large by mothers and very little by fathers. Yet, given a continuum of associa tions where the activities vary from being linked to the female role to bei linked to the male role, it seems likely that the husband may serve as th initiator for both those where the activity is a male one and those where th activity is defined as appropriate for either sex. The data above presente suggest that the association studied belongs in the non-sex-linked categor

[4] The lack of association in the data between attendance and measures of social cla suggests an additional limit to the extent to which one may generalize from the abov findings. It has been shown above that the variables predicting attendance are not th same as those predicting membership. Thus, since we do not have data on nonmember it may be that other variables, such as social class, predict membership but not atte dance.

In conclusion, the data presented seem to offer partial support for the nily-life-cycle part of Wilensky's hypotheses concerning the participation reer. The family, per se, is not an institution which facilitates involvement voluntary associations, except for those associations in which participa-n is based upon family interests, for example, Boy Scouts. Rather, it pears that it is marriage and consequent joint-spouse participation which 'es rise to high participation in the world of voluntary associations. nce, the wife's greater involvement in the family effects a marginal status · her between the worlds of family localism and of civic participation. ius, as Sussman (1955) and Schmidt and Rohrer (1956) found, the wife)ws greater variability over time in her participation than does the sband.

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Development Decision Making: A Comparative Study in Latin America[1]

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This study treats the organization of power and its consequences decision making in the area of economic development. The resea was carried out in two Latin American areas: Guadalajara in Me: and Cali in Colombia. The organization of power in the spher economic development was assessed through the complement techniques of interviewing knowledgeable persons and studie decisional activities. By conventional standards such as per ca gross product, the Guadalajara region is further along the roa economic development than Cali. Differences in this regard analyzed on the basis of power and decision-making styles. analysis concludes with a series of propositions concerning the soc organizational features of development decision making and som the implications of the findings for theories of modernization.

Theoretical approaches to the study of modernization and economic velopment are indeed numerous. The purpose of this study is to expl and compare several aspects of social organization and their relationsl to economic development. Specifically, I will be concerned with the of societal power, elite organization, and decision making in the devel ment process. The objectives of the analysis will be to identify, at community or regional level, those features of social organization t condition development decision making. Subsequently, I will discuss less detail how levels of economic development affect the organization societal power.

Theorizing in this area has been divided along two lines: the role certain power arrangements in the promotion of development, and consequences of development for change in the structure of power.

Concerning the first of these directional relationships, a number of c temporary analysts have given power and decision making a central pl in their explanations of the development process. Hirschman (1958, 26–27) states: "Our diagnosis is simply that countries fail to take advant of their development potential because, for reasons largely related to tl

[1] This research was supported by a grant from the Council for Intersocietal Studie Northwestern University. I am grateful to the council, to its director, Richard Schwa and to Raymond W. Mack for their generous assistance in making time and mo available for the study. I have also benefited from discussions of the research with colleagues in the Department of Sociology. An earlier version of the paper was presen at the annual meeting of the Society for the Study of Social Problems, San Franci August 1969. Charles M. Bonjean and Vincent Jefferies provided me with useful c cisms of that draft.

mage of change, they find it difficult to take the decisions needed for de-
'elopment in the required number and with the required speed . . . the
hortages of specific factors or "pre-requisites" of production are inter-
reted as a manifestation of the basic deficiency in organization. . . . We
ave identified the ability to make such decisions as the scarce resource
hich conditions all other scarcities and difficulties in underdeveloped
ountries."

Although Hirschman does not discuss the relationship between power nd the deficiencies in organization that inhibit or promote effective de- ision making, several things are implied (e.g., a privileged elite whose 'image of change" is the status quo or no change).

Hoselitz (1960, pp. 48–49) specifies such a relationship in the following: ' . since there seems to exist a considerable body of empirical evidence hat in presently underdeveloped countries economic leadership is concen- rated among a group of people who also control political power, a reallo- ation of patterns of responsibility and authority demands a shift of olitical power from the present political elite to a different one and the imultaneous reshuffling of the status system of the society."

In other approaches: Horowitz (1966) places heavy emphasis on the nanipulation of power by elites opposed to development out of selfish nterests; Nash (1959) proposes that an extreme polarization of wealth nd power is inimical to development, although, under other circumstances, 'the more organized the group holding political power, the easier it is to mbark on development programs"; Rostow (1956) and Hagen (1962) ocate the impetus to development in a lesser elite which is denied access nto the traditional and dominant one and which therefore seeks alternative outes to the achievement of high status in nontraditional activities, for xample, entrepreneurship.

Similarly, economic development (modernization or industrialization) as been used as an independent variable in explanations of change in the rganization and distribution of societal power. At the most general level, heories of modernization have maintained that economic growth con- ributes to the specialization and differentiation of power, changes in the ases of power legitimation, and democratization (see Spengler 1960). Eisenstadt (1966, p. 4) summarizes this position: "In the political sphere nodernization has been characterized, first, by growing extension of the erritorial scope and especially by the intensification of the power of the entral, legal, administrative, and political agencies of the Society. Second, t has been characterized by the continual spread of political power to vider groups in the Society. . . . Third, modern societies are in some sense lemocratic or at least populist societies. They are characterized by the lecline of traditional legitimation of the rulers."

Other observers have indicated that changes in societal power relation- hips attendant to the development process may not be as thoroughgoing s the modernization literature suggests. In the Latin American case Ratinoff (1967, pp. 73–74) notes: "The 'revolutionary' and 'populist' im- pulse which characterized the middle-class movements at the initial stage

does not appear to have aimed at the introduction of structural chang incompatible with the traditional order. . . . The incorporation of t middle sectors of society into the structure of power did not seem to ent the complete replacement of the elite; it simply meant that they had share power with these newcomers—to come to terms, to compromi or to negotiate."

The most reasonable conclusion at this point is that beyond certa gross generalizations we simply do not have sufficient data on either t types of power arrangements conducive to development or on changes the organization of power induced by economic development. As Moo (1964, p. 907) has commented, the evidence is widely varied and generaliz tion about the topic presents the greatest difficulty.

Accordingly, this study seeks to explore in greater detail and in con parative terms relationships between power and economic developmen Initially, interest will focus on the conditions under which various pow arrangements are conducive to decision making in development issu Subsequently, some attention will be given to reciprocal relationshi between these factors.

CONCEPTUAL FRAMEWORK

In order to clarify the notion of power arrangements and to indicate range of possible instances, a definition of power and some discussion its *bases* and *dimensions* are necessary.

Max Weber (1958, p. 180) defined power as "the chance (or probabilit of a man or a number of men to realize their own will in a communal actio even against the resistance of others who are participating in the action The present usage parallels Weber, adding only a specification of the mea by which one's own will is realized and a clarification of certain aspects the term.

Power refers to the capacity to mobilize resources for the accomplis ment of intended effects with recourse to some type of sanction(s) to e courage compliance. The greater this capacity, the higher the probabili of "realizing one's own will even against resistance." This capacity is th generic term and is distinguished from the diverse sources upon which may rest. Recourse to the application of sanctions distinguishes power fro *influence*, which involves only the ability to mobilize resources. The notio of capacity also suggests that the attribution of power does not depend o its overt exercise but also includes potential or latent ability. Moreove the attribution of power does not depend on success in the accomplishme of intended effects; one may lose a contest and still be said to have pow (this, of course, is what the notion of probability in Weber's definitio refers to). Finally, the definition specifies *intention* as distinguishing pow from unintentional control (see Wrong 1968; Weber 1947; Parsons 196 Lasswell and Kaplan 1950; Blau 1964; Lehman 1969).

Weber allowed that power may derive from numerous sources. (particular interest to him were "constellation of interest" and "establish

authority," though he was also well aware of the role of coercion (see Bendix 1962, pp. 286–90). The same tripartite breakdown is encountered in several recent works under the heading "types of power." Etzioni (1961) speaks of coercive, normative, and remunerative power; and Mills (1959) discusses authority, manipulation, and coercion as "the three types [that] must constantly be sorted out when we think about the nature of power." For the present, there seems to be no need to claim that these bases are exhaustive, but simply that they are essential to any analysis of power.

Authority refers to voluntary compliance based on a belief in "the right to command and the duty to obey" (Bendix 1962, p. 290). The capacity to act that derives from authority is institutionalized power. *Constellation of interest* or *remuneration* refers to voluntary compliance, but here it is based on self-interest rather than right.[2] Manipulation and coercion both refer to nonvoluntary compliance but should be distinguished since they are based on different resources. Following Mills (1959), *manipulation* is based on the ability to exercise power without the knowledge of those over whom it is exercised. *Coercion*, of course, is involuntary compliance based on force.

In addition to the foregoing bases of power, it will also be useful to specify several dimensions. Much of the research literature in this field has been concerned with a single question about power, namely, how broadly or narrowly it is distributed. What this emphasis has obscured is that distributions are at least two-dimensional; they may be broad or narrow and they may also be flat (rectangular) or peaked. Substantively, power may be distributed among many actors or a few (i.e., broad or narrow), and those actors may be more or less equal in their power. More for convenience than precision, these two dimensions will be called the *distribution of power* and the *inequality of power*. A third dimension, the *coordination of power*, will be used to refer to the extent to which actors having power interact with one another and share common values, that is, how cohesive they are.

I shall also consider the *total amount of power* available to actors in a system as variable (within and across systems) or a nonzero sum quotient (see Lynd 1957; Parsons 1957). Generally speaking, the total amount of power available for allocation and application is a function of the diversity or resource bases and the diversity as well as the efficiency of mobilization means and available sanctions.

The dependent variable in this analysis is a complex one involving both economic development in the strict sense of the term—that is, the exploitation of productive resources for expansion of real income—as well as

[2] The distinction between authority and constellation of interest or remuneration is analytic and difficult to apply empirically, particularly in the economic realm. As the analysis will indicate, I have attempted a rough application of the concepts but feel the question deserves a good deal more research on how these conceptually fundamental bases of power fuse and separate empirically. The theoretical utility of the distinction is further attested to in a recent paper by Lehman (1969), who deals with the macrosociological consequences of power deriving from utilitarian, coercive, and normative resources.

decisional activities whose objective is to promote economic development. The principal focus of the analysis will be to explain, on the basis of how power is organized, those conditions under which decisions can be made and executed for the purpose of furthering what participants in decision making regard as effective means of accomplishing development. On the basis of evidence to be presented, I will argue that this capacity for development decision making is closely related to economic development as it is conventionally defined and measured (e.g., gross product, per capita income).

RESEARCH METHODS

The research was conducted in Mexico and Colombia. In order to obtain an in-depth view of the organization of power and decision making, practical considerations led me to focus on a unit of observation that included an urban area and its dependent rural surroundings. The two regional localities were Cali in the department of Valle del Cauca, Colombia, and Guadalajara in the state of Jalisco, Mexico. With a few exceptions prompted by organizational differences, the procedures followed in each country were identical.

Four distinct strategies were used in gathering the data. First, interviews were conducted with a number of persons occupying important positions in public- and private-sector organizations directly concerned with development activities. This universe of positional leaders or, as they will be called, "subleaders," included the chief executive officers of the relevant organizations (e.g., public sector: municipal and state level agencies in charge of economic planning, urban planning and services, public works, housing, agriculture, the treasury, education, public credit, federally sponsored regional planning, etc.; private sector: banker's association, chamber of commerce, industrial associations, agricultural interest groups, employer's association, private-sector planning and educational institutes, merchant's association, etc.). Typically these organizations had a first and second man, president and director or manager and secretary. When such was the case both were interviewed.

All persons at this stage were given a structured interview that covered autobiographical material, attitudinal items, perceptions of influential people and organizations, opinions concerning important developmental activities realized or in progress in the region, persons participating in these activities, major problems facing the region, and appropriate roles of the public and private sectors in the promotion of development.

The second and third steps of the procedure built on the first. Persons most frequently nominated by the subleaders as "influentials" were interviewed using the same format.[3] Finally, the development activities noted by subleaders as important contributions to the region's progress were coded. In each locale five such decisional, or activity, areas were selected on the basis of the frequency with which they were mentioned and the extent to which they represented a broad spectrum of development-re-

[3] The cutoff point used in both areas was four nominations by subleaders.

lated undertakings.[4] In each of these areas a case-study analysis was conducted in an effort to identify important participants and illuminate the decision-making process. At this stage additional interviews were conducted, occasionally with people who had already been contacted. The pool of persons knowledgeable in each decisional area was generated from first- and second-stage interviews and from referrals by these participants. In addition to interviews, a variety of written materials concerning these issues were consulted. The total number of interviewees is shown in table 1.

A fourth strategy involved the collection of archival data concerning population and labor force characteristics, formation of enterprises, indices of economic growth, and general characteristics of the regional and national economy. It is largely this type of material that informs the following section.

TABLE 1

INTERVIEWEES

	Private-Sector Sub-leaders	Public-Sector Sub-leaders	Influentials	Activity Partici-pants	Total
Cali . . .	40	31	17	20	108
Guadalajara .	33	32	15	25	105
Total	73	63	32	45	213

THE SITES

Mexico and Colombia are aptly comparable in several senses. Both have been relatively stable politically in recent years: Mexico since the 1930s, when civil strife which followed the Revolution ended, and Colombia since 1957, when the last military dictatorship was replaced by a national front government and the *violencia* which had plagued the countryside since 1948 began to abate. The two countries are also economically comparable in a noninvidious sense. Although Mexico's growth rate is one of the most impressive among developing nations, Colombia has not been laggard.

[4] In order to systematically establish a focus for the study of participation and the overt exercise of influence, the responses of interviewees concerning important development activities were first tabulated. A wide variety of events were recorded, ranging from very specific projects to general changes; probes used to elicit more specific responses were not always successful. Next, these responses were grouped into decision areas that would reflect both the most important activities and a broad spectrum of decision making. Accordingly, while infrastructure works were the most frequently mentioned projects, it was decided not to study separately highways, electrification, etc. Early indications were that such a procedure would have resulted in examination of a series of activities realized in roughly the same way. Rather, infrastructure was designated as one of five areas selected to obtain a broader and more representative picture of the decision-making process. Although it is not specifically discussed in the text, decision participation was employed as a check on the nominations for "influential" in an effort to determine actual leaders, that is, persons qualifying on both criteria.

Between 1960 and 1965 the annual growth rate of gross national product was 6.0 percent for Mexico and 4.5 percent for Colombia; on a per capita basis the figures were 2.6 percent and 1.7 percent, respectively.

Important differences between the political systems of the two countries have far-reaching implications for development. Mexico is essentially a one-party state in which the official party, PRI (Partido Revolucionario Institucional), retains great power in all aspects of national life and is practically indistinguishable from government. Colombia's unique National Front government, established by plebiscite in 1957, provides for a sixteen-year period during which the Liberal and Conservative parties alternate in the presidency. A system of parity exists within each administration whereby administrative and elective posts from top to bottom are divided equally between the two parties and the factions within each. Political power is fragmented, and effective action is often impeded by extensive veto power.

Of particular relevance for this study, given its regional orientation, is a unique demographic parallel. In each country the capital city is the largest in terms of both population and economic productivity. The second- and third-ranking cities are of nearly equal size; the first is substantially industrialized and somewhat of a national showcase, and the second is a transitional case, historically agrarian but with growing industrial importance. Monterrey (pop. 1,200,000), in Mexico, and Medellín (pop. 1,000,000), in Colombia, are the industrial centers. Guadalajara (pop 1,300,000) and Cali (pop. 900,000)[5] are the more transitional cases that were selected for this study. Comparability, which is by no means strict, lies in the similarities of their place in the national picture and of their historical experience (i.e., transition from an agrarian economy).

The urban populations of Cali and Guadalajara are growing rapidly Between 1951 and 1964 Cali's population more than doubled, increasing from 284,200 to 637,900, (224 percent), while in Guadalajara the change was from 406,389 to 967,024 (237 percent). In the Mexican case, urban population concentration is more dramatic because Guadalajara and two immediately adjacent suburbs comprise over half the urban population of the state of Jalisco.[6] Though Cali, like Guadalajara, is the capital of its department, there are a number of other important cities, including nearby Palmir (pop. 140,889 in 1964) and the seaport of Buenaventura (pop 96,708 in 1964).

Long-range figures on changes in labor force characteristics are not available. Table 2, however, indicates recent directions of those changes. In both regions, the labor force concentrated in primary activities is decreasing as a result of increases in transformation (or manufacturing) industry and, particularly, in commerce and services. The trend is more evident in the Colombian case.

[5] 1968 population estimates.

[6] In Mexico "urban" is defined as having a population of 2,500 or more. Guadalajara and the two adjacent municipalities, each at about 80,000, represent the only large population concentrations in the state of Jailsco.

Table 3 indicates changes in the relative productivity of various activi-
es and provides a complementary picture. In the Mexican case, both rimary and secondary activities as well as commerce and services in the ertiary sector have improved. In the Colombian case, changes have been iore dramatic; primary activities have declined in relative importance hile manufacturing and commerce have made gains.

In absolute terms, productivity is much greater in the Mexican case; etween 1957 and 1967 the increase, at constant prices, in regional gross roduct was from 68 to 145 billion Mexican pesos. Between 1954 and 1964, ie comparable figures for the Colombian case were 24–38 billion pesos.

TABLE 2

OPULATION ECONOMICALLY ACTIVE BY TYPE OF ACTIVITY IN JALISCO, MEXICO, AND VALLE DEL CAUCA, COLOMBIA, FOR VARIOUS YEARS IN PERCENTAGES

YEAR	AGRICULTURE, LIVESTOCK, FISHING	INDUSTRY: Extractive	INDUSTRY: Transformation	INDUSTRY: Construction	INDUSTRY: Electricity, Gas	COMMERCE	TRANSPORTATION	SERVICES	UNSPECIFIED AND UNEMPLOYED	TOTAL (*N*)
					Jalisco					
47	60 16	0 34	12 09	2 89	0 25	9 02	2 38	8 20	4.64	99 97 (516,870)
57	54 19	0 51	14 79	4 06	0 33	10 39	3 00	11 18	1 55	100 00 (684,998)
67	45 44	1 02	17 22	5 31	0 31	12 54	3 84	14 12	0.18	99.98 (989,026)
					Valle del Cauca					
51	46 28	1 11	15 91	4 71	0 30	7 38	5 12	15.20	3 98	99 99 (398,746)
64	32 43	1 30	18 95	5 75	0 35	11 98	5 51	19 81	3 92	100.00 (529,544)

SOURCES.—Jalisco, Mexico estimations of the State Department of Economics based on census data. alle del Cauca, Colombia. National Census of 1964 and 1951.

hroughout the two periods the Mexican peso was worth more. The annual rowth rate of Jalisco's regional gross product between 1952 and 1964 was .9 percent, 4.8 percent per capita. Comparable figures for Valle del Cauca ere 5.2 and 1.8 percent; between 1963 and 1964 the gross product of this gion decreased 5 percent, and indications are that the situation has not nproved in ensuing years.

Cali is the center of an especially fertile agricultural region. Owing, owever, to inequities in the land tenure system, agricultural productivity as never reached its full potential. Historically, the best land has been eld by a small number of families or gentlemen farmers devoted to ex- nsive and inefficient land uses, principally livestock production (see lasier 1966). Paradoxically, the poorer land has been intensively cultivated y small holders or *minifundistas*. According to an agricultural census of 959 (*Censo Agropecuario del Valle del Cauca* 1959), 2 percent of the farm wners controlled 43 percent of the land; small holders (ten *hectares* or less, hich is equivalent to twenty-five acres or less), who represent 70 percent f the rural population, controlled less than 10 percent of the land. Recent

figures indicate that the pattern of land usage, though not of ownership, changing. Under the threat of expropriation of unproductive plots embodi in the 1961 Land Reform Act, many of the large holders have turned cultivation (*Colombia: Estadisticas Agropecuarias 1950–1966* 1966).

The social structural parallels of this situation include a rigid strati cation system based on property ownership, concentration of wealth ar power,[7] and a separatist tendency rooted in the tradition of the sel sufficient *hacienda*.

TABLE 3

ORIGIN OF GROSS REGIONAL PRODUCT IN JALISCO, MEXICO, AND VALLE DEL CAUCA, COLOMBIA, AT CONSTANT PRICES IN PERCENTAGES

	Jalisco		Valle del Cauca	
	1957	1967	1954	1964
Primary sector	18.60	20.28	23.26	21.30
Agriculture .	10.27	12.48	16.91	15.30
Livestock.. ...	7.74	7.40	4.19	3.90
Forestry........	0.54	0.30	0.00	0.00
Fishing. . . .	0.05	0.10	.	.
Secondary sector.....	25.10	27.13	27.64	33.20
Mining........	1.36	1.73	0.38	0.90
Transformation..	20.40	21.58	20.68	27.10
Construction ...	2.61	3.24	5.91	4.00
Electric....... .	0.73	0.58	0.67	1.20
Tertiary sector.....	56.30	52.59	49.08	45.50
Commerce	17.88	21.48	14.62	20.20
Services........	7.59	9.79	9.04	10.30
Banking........	5.96	4.94	2.20	1.60
Government.. ..	12.56	7.04	6.17	4.40
Communication and transportation	12.31	9.34	17.05	9.00

SOURCES.—Jalisco: estimates of the State Department of Economics. Valle del Cauca: *El por que de un plan de desarrollo económico y social para el departamento del Valle del Cauca* (1965).

Industrialization is gradually altering these conditions. Between 195 and 1965 the number of manufacturing enterprises increased from 1,50 to 1,795 (*Cali y el Valle del Cauca*, n.d.). Parallel changes in the labor forc and productivity are indicated in the preceding tables. The principa characteristic of this industry, however, is that it is not locally owned. O the top twenty corporations at least half are foreign controlled and fourth are national firms. Large-scale local entrepreneurship is rare, witl notable exceptions in the paper products, sugar, and steel industries.

Guadalajara also developed as the center of a productive agricultura region. Prior to the Revolution, large haciendas were the dominant socia

[7] Figures on the concentration of wealth in the country as a whole are provided i Consuegra (1964). No precise figures on the Cali situation are available, but an inspectio of chamber of commerce records on the major corporations in the area makes it clear tha a small number of families have extensive holdings in agriculture and industry.

and economic institutions. With the introduction of land reform in the 1920s, and particularly in the 1930s, many, though not all, of these holdings were parceled out in the form of small private plots, *ejidos*, and cooperatives. Though the system is often criticized for inequities in the distribution procedure and for low productivity, its social and structural implications have been of great magnitude. The rural gentry went into rapid decline, power was transferred from a land-owning to a political elite, and social status came to rely on urban property ownership and entrepreneurship.

Local industry in Guadalajara is based on small (artisan) and medium-sized (light manufacturing) establishments. One report indicates that the number of industrial firms increased from 4,472 to 8,672 between 1957 and 1965 (*Jalisco Ofrece* 1968).

Foreign ownership or control is evident in perhaps a third of the larger enterprises. More characteristic however, is the presence of firms owned by Monterrey and Mexico City interests. By contrast with Cali, there is more joint (Mexican-foreign) participation in industrial investment. Although outside interests control the majority of local investment, a number of important firms are locally owned, most notably in shoes, synthetic fibers, metal products, construction materials, glass, and textiles.

In summary, Cali and Guadalajara share a historical dependence on agriculture, rapid urbanization, and increasing productivity of industrial, commercial, and service sectors. In both areas the bulk of large industrial firms are absentee owned or controlled. In both areas, there are few true corporations among locally owned enterprises; the majority of the stock is typically held by members of the immediate family.

One of the key differences between these areas has to do with political organization. Mexico's unitary system enjoys wide public acceptance and is structurally rooted in a series of farmer, worker, and bureaucrat associations organized at every level of the society. Colombia's present two-party system is a vehicle for promoting political stability. Success in that endeavor has been accompanied by factionalism and institutionalized conflict Regionalism is another difference between these areas. For geographical and historical reasons, Valle del Cauca, along with other departments, has maintained a tradition of regional separatism which is much less evident in the Mexican case. In terms of property relationships, land reform in Mexico has fairly effectively eliminated landowners with large holdings and propertyless peasants. In Colombia and, particularly in the agriculturally rich area of the Cauca Valley, recent land reform measures have yet to alter the pattern of large holdings by a rural aristrocracy.

Finally, as the data on productivity, growth rates, and industrial firms indicate, Guadalajara may be judged further along the road to economic development. Several qualitative impressions support that assessment, including, to a greater extent in Guadalajara than in Cali, availability of housing and a relative absence of slums, programs of public and private welfare assistance, availability of urban services (e.g., potable water, electricity, sewage, etc.).

To account for the differences in economic development, I shall n consider certain aspects of social organization and the structure of pov in the two localities.

THE STRUCTURE OF LEADERSHIP

A useful opening move in the analysis of leadership organization is question people who, because of their positions in the social structure, c be presumed to have this type of knowledge. Research comparing p ceptions of leadership by these "positional" samples with the perceptio of general or inexpert samples and "actual" leaders (as determined additional criteria) tends to indicate that the positional and leader grou show high interagreement and low agreement with the general samp (see Blankenship 1964). Obviously a number of problems arise such collective ignorance and misperception, or the relationship between pe ceived and "actual" influence. While the procedure is not self-sufficie it does provide a good starting point.

Table 4 indicates some of the results obtained in the first and secon steps of the research procedure. Cali's top influentials occupy a varie of positions and, not uncommonly, two or more simultaneously. Of t twenty-one, eight are active in public positions, seven in industry (wi some overlap), three in investment firms, two in educational institutio and three in private interest groups. The initial impression given by tl data is one of diversity in the constituency of the influential group. T some extent this is true, but at least two considerations must be introduc as qualifiers. First, multiple occupations imply a greater concentration influence. For example, the two largest local industry-owning families al own the two principal newspapers; at least one third of the influentia own large agricultural properties or are the sons of landowners with larg holdings. Second, there is much circulation of these people among to positions. For example, three of the influentials are former mayors; two the public leaders have returned to high posts in private industry, since th survey; among the organizational roles on the list at least three we formerly held by others in the group of twenty-one. The traffic of in fluentials between public and private positions results from the fact th public office at the regional level in Colombia is often an amateur's game which prominent private-sector people contribute a year or two as a publi service.[8]

Guadalajara's influentials represent predominantly two institution sectors, industry and government. Between these two there is no overlap in Mexico, politics is a professional game played by those who distinguis themselves at successive levels of government and party administratio Similarly, there is little positional overlap within the private sector. Al

[8] For example, there tends to be a rapid turnover in local and state administrations. Onl very recently have there been cases of these administrations completing their forma period of tenure, which is a mere two years. Typically government officials do not hav previous experience in public life and, before long, return to positions in the private sector

TABLE 4

Influentials by Occupation and Number of Nominations Received in Cali and Guadalajara

Occupation	Nominations Received from: Private-Sector Subleaders	Public-Sector Subleaders	Subtotal	Other Influentials	Total
Cali:					
1. Industrialist, paper products	27	12	39	13	52
2. Director, regional development corporation	19	10	29	7	36
3 Mayor, head of investment company	11	12	23	7	30
4 Governor of department	6	11	17	1	18
5. Senator, industrialist, newspaper owner	12	4	16	6	22
6. President of investment company	14	2	16	6	22
7. Rector of state university	9	7	16	5	21
8 Federal minister	7	5	12	5	17
9. Director, sugar producers' association	9	2	11	2	13
10 Director of civic association, newsman	7	1	8	3	11
11 Director of investment company	5	3	8	1	9
12 Banker	6	1	7	0	7
13 Industrialist, construction	5	1	6	3	9
14. Industrialist, metal products	3	3	6	6	12
15 Industrialist sugar and diverse	5	1	6	3	9
16. Businessman, political leader	3	3	6	0	6
17 Director, municipal services	2	4	6	0	6
18 Newspaper owner, industrialist	4	2	6	2	8
19 Industrialist, construction	3	2	5	2	7
20. Director, federal educational service	4	1	5	1	6
21 Director, industrial association	3	1	4	1	5
Guadalajara:					
1 Governor of state	12	12	24	7	31
2 Industrialist, shoes	11	4	15	6	21
3 Director, State Department of Economy	7	7	14	3	17
4 Banker	8	5	13	6	19
5 Industrialist, metal products	10	1	11	7	18
6 Industrialist, food products	10	1	11	5	16
7 Industrialist, beverages	6	3	9	5	14
8 Treasurer of state	4	4	8	6	14
9. Industrialist, food products	5	2	7	6	13
10 Industrialist, construction	3	2	5	2	7
11 Mayor	3	2	5	1	6
12 Industrialist, construction	3	1	4	3	7
13 Industrialist, metal products	4	0	4	3	7
14 Industrialist, chemicals	3	1	4	3	7
15 Industrialist, food products	3	1	4	1	5
16 Industrialist, construction	3	1	4	1	5
17. Director, regional planning agency	3	1	4	1	5
18 Businessman	2	2	4	1	5
19. Industrialist, textiles	1	3	4	4	8

though several of the industrialists participate in joint investments, each is financially and occupationally committed to his own industry. The distribution of industry ownership is much broader than in Cali.

Table 5 demonstrates that Cali's most influential development-related organizations represent equally the public and the private sectors; the top ten are evenly divided. Considerable importance is attached to the state uni-

TABLE 5

INFLUENTIAL ORGANIZATIONS AND NUMBER OF NOMINATIONS RECEIVED IN CALI AND GUADALAJARA

	Nominations Received from				
Name	Private Sector Sub-leaders	Public Sector Sub-leaders	Sub-total	Influ-entials	Total
Cali:					
1. State university	23	17	40	12	52
2. Civic action association (UAV)	17	14	31	7	38
3. Regional development corporation (CVC)	14	15	29	10	39
4. Industrialists' association (ANDI)	17	11	28	8	36
5. State government	9	8	17	3	20
6. Financial corporation	15	2	17	7	24
7. Merchants' association (FENALCO)	9	8	17	2	19
8. Municipal government	7	8	15	2	17
9. Municipal services corporation (EMCALI)	5	8	13	6	19
10. Administrative Education Institute (INCOLDA)	7	3	10	7	17
11. Chamber of commerce	6	2	8	2	10
12. Small industrialists' association	5	3	8	1	9
13. Local bank	6	1	7	1	8
14. Sugar producers' association (ASOCANA)	5	2	7	1	8
15. Agriculturalists and cattlemans' association (SAG)	3	3	6	1	7
16. National educational service (SENA)	3	2	5	5	10
17. Federal agricultural credit agency	2	3	5	1	6
18. Paper industry corporation	4	1	5	0	5
Guadalajara:					
1. Chamber of commerce	15	20	35	9	44
2. Industrial chambers	12	19	31	8	39
3. Institute of Promotion and Economic Studies	4	16	20	3	23
4. Bankers' association	10	4	14	3	17
5. Coordinating Junta of Private Initiative	4	8	12	5	17
6. Employers' association	4	8	12	3	15
7. State department of economy	5	6	11	1	12
8. Official political party (PRI)	7	3	10	0	10
9. Labor union (CROC)	8	2	10	0	10
10. Labor union (CTM)	7	2	9	0	9
11. State government	2	3	5	0	5
12. Urbanization and planning department of state government	3	2	5	2	7

versity (Universidad del Valle) because of its community involvement, particularly through management training programs organized and attended by locally influential persons. Another public institution of great importance is the CVC (Corporación Autonomía Regional del Cauca), a federal decentralized corporation chiefly devoted to the creation of infrastructure works (electrical power, flood control, irrigation, etc.). Top-level private organizations include an association for regional improvement (Unidad de Acción Vallecaucano), which acts as a pressure group to attract more federal investment to the area, and the local branch of the national industrialists association (Asociación Nacional de Industriales or ANDI). Private-sector interest groups, financial institutions, and education institutions also play a role.

Leading organizations in Guadalajara are somewhat different in character. Despite appearances, they are equally or, perhaps, more numerous; respondents often refer to composites or organizations rather than particular ones (e.g., there are fifteen separate industrial chambers, and the official party apparatus embraces the labor unions, farmer's associations, and organizations of public employees). By contrast with Cali, the top organizations tend to represent the private sector and coalitions of private interests. The industrial chambers, for example, have specific groups for their separate industries and an informal organization of the presidents and directors of all the chambers. The coordination of these organizations is further attested to by the fact that representatives of the industrial chambers, the chamber of commerce, the banker's association and the employer's association are jointly organized in the Coordinating Junta of Private Initiative The members of that alliance also support the activities of the Jalisco Institute for Promotion and Economic Studies. In short, the top six "organizations" representing individual industrial and commercial firms are closely coordinated.

The Guadalajara data reflect somewhat of a paradox in that, on an individual basis, the governor and several of his lieutenants are regarded as top influentials, while, on an organizational basis, public institutions are judged of lesser importance than private ones. As we shall see presently, this is not a valid appraisal, since the public sector has great influence. An explanation of the finding may be that the question, which asked for important "organizations," tended to suggest private-sector groups rather than instrumentalities of the one-party state.

Although it is not entirely apparent from these tables, subleaders and influentials were in substantial agreement concerning top people and organizations. Coincidentally, in both places the influentials would have included one more person in their own ranks than would the subleaders.[9]

[9] In Cali one man received only one nomination from subleaders but three from influentials In Guadalajara another received four nominations from influentials but none from subleaders. The case-study analyses indicated that both these people had played key roles in certain activities. Generally, the agreement between subleaders and influentials

Apart from this, the patterns of nomination were quite similar. Ranl order correlations between the nominations of subleaders and of influentia were +0.65 in Cali and +0.76 in Guadalajara for influentials and +0.8 in Cali and +0.85 in Guadalajara for organizations.

A final contrast lies in the connection between top persons and organiza tions. Of Cali's twenty-one influentials, twelve were the principal admini trative officers of distinct influential organizations. In Guadalajara, onl four of nineteen influentials were the chief executives of top organization Possible distortions in this result owing to the character and number (groups mentioned in Guadalajara were taken into account by introducin the less frequently mentioned organizations into the analysis. The resu was an increase of one; that is, among nineteen influentials five heade important organizations.

When the results are combined with those previously discussed, a dis tinct difference between the two regions emerges. Cali reflects a high degre of coincidence between influentials and organizations, a high overlap (top people and top institutions. The organizations themselves, however, ar not collaborative; no groups coordinate their separate activities. To som extent this situation is reversed in Guadalajara. Here, overlap betwee influentials and organizations is less evident, and there is practically n circulation of influentials in top organizational roles. The organizations however, are more closely coordinated through several types of meta organization, for example, PRI and the Coordinating Junta. Stated mor generally, Cali has a close-knit elite based on the interconnection amon individuals who represent a variety of discrete organizations. In Guadala jara, influence is distributed among individuals with roots in political an industrial institutions; its elite is an organizational one based on a coalitio of public- and private-sector groups.

Complementary evidence for these observations if provided by an analy sis of social mobility patterns.

In table 6 all respondents in Cali and Guadalajara are compared wit their fathers by occupational level. As a result of the sampling procedur the distributions of sons in the two areas should be similar, which is th case in table 6. However, the distributions of fathers by occupational level is somewhat broader in Guadalajara than in Cali, indicating greater mobility and access to elite-connected positions.

Although space does not allow presentation of attitudinal data, the evidence indicates greater ideological cohesiveness among the Guadalajara

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was quite high by contrast with studies done in North American communities. In that literature the maximum amount of overlap reported is around 90 precent, and that level is seldom reached. Here the figure is closer to 95 percent. This probably has something to do with the visibility of leaders in Latin society. I suspect it is also due to the specificity of the area and type of influence being probed here. If so, the implication for future research is that greater reliability in these influence ratings could be achieved through looking separately at particular areas in which power is exercised.

sample.[10] This finding is consistent with differences in political systems. The following section, which discusses decision-making processes, helps to substantiate and elaborate these conclusions.

THE PROCESS OF DECISION MAKING

A third step in the research procedure involved case-study analysis of five activity or decisional areas that subleaders and influentials[11] considered most important in the development of the region. In Cali and its surroundings these included: work of the state university, infrastructure projects

TABLE 6

OCCUPATIONAL LEVEL OF FATHERS ACCORDING TO OCCUPATIONAL LEVEL OF SONS

	Sons					
Fathers	1	2	3	4	5	Total
			Cali			
1	4	3	0	0	0	7
2	12	35	0	0	0	47
3	2	20	1	0	0	23
4	1	3	1	0	0	5
5	0	1	1	0	0	2
Total	19	62	3	0	0	84
			Guadalajara			
1	11	1	0	0	0	12
2	5	16	0	0	0	21
3	2	22	1	0	0	25
4	0	11	1	0	0	12
5	1	2	1	1	0	4
Total	19	52	3	1	0	75

NOTE.—Level 1 is the highest and corresponds roughly to the upper class, e.g., owners and managers of large-scale enterprises; level 2 is upper middle class, e.g., managers, engineers, level 3 is middle class, e.g., small business proprietors, public employees; level 4 is lower middle class, e.g., skilled and semiskilled workers, level 5 is lower class, e.g., unskilled and agricultural workers. (See Whiteford 1964, Tumin and Feldman 1961; Kahl 1965, 1968.)

of the regional development corporation, agricultural development, urban development of the city of Cali, and industrial promotion. In Guadalajara and its surroundings they were: economic planning, infrastructure projects of the state and federal government, agricultural development, urban development in the city of Guadalajara, and industrial promotion. The

[10] Evidence for this assertion derived from interview questions dealing with the appropriate scope of governmental activities, the role of foreign investment in the country, and beliefs about political parties.

[11] As was the case with designating influentials, the issue areas were chosen on the basis of subleader nominations. Here, again, the influentials were in substantial agreement.

similarities between these independently generated lists of key development projects is noteworthy and perhaps suggestive of a general profile for analyzing the development process.

Decision-making styles in Cali and Guadalajara are in distinct contrast. A quantitative analysis of participation in the decisional activities indicates that, first, in Cali actual participants are well represented in the list of influentials and, further, there is a substantial amount of personnel overlap (or multiple-issue participation) across activities. In Guadalajara, influentials are less numerous among actual decision participants, and generalized participation is less common, typical mainly of top political leaders. The following figures confirm this appraisal: the average number of activities in which influentials participated was two and one-half for Cali and two for Guadalajara; multiple-activity participation (here three or more) was characteristic of over half the Cali influentials (eleven of twenty-one) but of only about a quarter of the Guadalajara influentials (four of nineteen); of eleven multiple-issue participants in Cali, five were public leaders, while in Guadalajara three of the four were from the public sector. A final appraisal is arrived at by averaging the number of influentials participating in each of the five activities; in Cali the figure is approximately eleven, and in Guadalajara it is about seven.

A related aspect of this pattern is the tendency of Cali influentials to become involved in activities because of who they are quite apart from the appropriateness of their experience or position(s) to the activity. In Guadalajara individuals tend to participate as representatives of organizations with a special interest or competence in the activity. Stated differently—and the generalization is of great importance in contrasting decision-making styles—participation in Cali's development decisions is based mainly on alliances among prominent individuals, while participation in Guadalajara is based on networks of issue-related organizations and their individual representatives.

Another central contrast in decision-making styles concerns the public-private sector alliance. In Guadalajara state and local governments work in close collaboration with a series of representative private sector associations (e.g., the industrial chambers, the chamber of commerce, the banker's association, etc.). Few projects are planned or undertaken without consultation and consensus between these two institutions. The promotion of infrastructure is illustrative. A major expansion of Guadalajara's International Airport, initiated by the governor was accomplished as a result of a coordinated campaign in which the industrial and commercial chambers raised 10 percent of the estimated cost in the community. The state government matched this sum, and the next move was a united front appeal to federal authorities who, evidently impressed by local initiative and commitment, quickly approved the additional funding. Undoubtedly, the project was somewhere on the agenda of federal plans. Local efforts, however, were responsible for the project receiving a higher priority. In a similar case, initiative was mounted in the private sector to bring natural gas to the area as a cheap source of energy that would attract new industry and

lower costs for existing plants. The chambers financed a feasibility study and later won the support of the governor, who successfully persuaded federal authorities to construct a gas viaduct. These and other projects have been facilitated by the cooperation between parallel planning agencies of the public and private sectors.

In Cali such organizational collaboration is rare. Efforts over a period of years to create an agency for development planning and promotion have been frustrated by vacillating public support, which has alienated many private-sector backers of the plan. Historically, the creation of Cali's regional development agency (CVC) was actively opposed and nearly sabotaged by a group of landowners with large holdings who objected to the agency's financing through a property surtax. Although the agency was finally established and has made fundamental contributions to the area's growth, continuing opposition to a nominal increase in the tax rate has made the CVC perilously dependent on special federal allocations and international loans.

A final contrast in decision-making styles is in the area of the federal-local alliance. In Mexico paralleled administrative structures at the federal, state, and local level are strongly rooted and authoritatively regarded. Because the one-party state controls the political future of regional officials and the purse strings of federal investment, collaboration is the most successful, and in many senses the only, alternative. Federal attention generally goes to those states that combine development potential with political harmony. The national government is anxious to promote showcases of development under the economic policies of the particular regime. Guadalajara's relatively congenial public-private alliance qualifies it as an especially favored area. Substantial federal investment in infrastructure (especially highways, electrification, and airports) and the promotion of tourism are illustrative.

Colombia has been noted for its regionalism, a tradition some feel derives from geographical separation of the major population centers by rugged mountain ranges. Certainly another aspect of this sentiment has been the political and administrative centralism in Bogota, a topic of perennial debate in Colombian politics. These factors, in combination with a lack of organizational unity in Cali, have minimized federal-local collaboration in development projects. Powerful local interests have resisted land reform laws and have turned to more intensive land usage only under threat of expropriation. On the other hand, local groups have argued that the federal government is dragging its feet on the construction of a new airport and an improved highway to the nearby seaport. While there are, undoubtedly, reasonable arguments on all sides of these issues, the situation is indicative of a politics of conflict in federal-local relationships. The consequences of this conflict are illustrated by the fact that Cali's most successful development agency, the CVC was created as an independent decentralized agency, relatively immune to the vicissitudes of national politics (Posada and Posada 1966). One can only speculate on what the developmental consequences of a more harmonious relationship might be.

Finally we confront the question of how these contrasting styles of decision making are linked to the differences in levels of economic development documented earlier. Economic growth in the Guadalajara region owes much to the extension of infrastructure services. New industries are locating there, and existing ones are expanding because of the availability of services and improved communications. Tourism, an important regional industry, has also benefited from these resources, which, as we have seen, are consequences of certain decisional activities. More jobs for a rapidly increasing urban population have led to significant increases in the productivity of the commercial sector. This cyclical process has been aided by promotional campaigns of local organizations to attract new investment. Public and private planning agencies have explored the needs of the region and collaborated with potential investors. A climate of organizational cooperation has facilitated major new joint investment projects in commerce and industry by local interests.

The Cali region has experienced economic development at a less impressive and sustained rate. Among the central explanations for this fact is that local groups have not been able to act in concert on projects. Much of the growth that has occurred is a result of industrial investment by nonlocal firms.

This analysis has attempted to trace these differential successes in the promotion of development to characteristics of the organization of power and how it affects the decision-making process. The workings of that process may be summarized in the following points.

1. In Cali there is a high degree of personnel overlap in separate activity areas; many of the same influentials were key participants in a variety of projects. In Guadalajara there is less overlap, and that which exists is among top political leaders.

2. In Guadalajara there is a reasonably high degree of organizational cooperation in the promotion of development activities. This is facilitated by several agencies from the public and private sectors which count the achievement of collaboration as one of their principal functions. In Cali activities are undertaken by individuals working more or less independently of organizational bases. There are no coordinating groups, and the important organizations that do exist are fragmented and without consistent leadership.

3. In Guadalajara there are close working relationships between government and private enterprise. Although the one-party state is extremely powerful, it seeks to coopt all segments of the community by offering concessions for support of the coalition (see Vernon 1959; Anderson and Cockcroft 1966). In Cali the fragmented two-party system and amateurish character of local and regional politics result in a lack of political-administrative continuity and, consequently, a separation (if not antagonism) of government and the private sector.

4. In both areas the organization of economic power is conditioned by the federal system. In the Mexican case local organizations have successfully commanded federal attention and intervened to change decisional

...orities. In the Colombian case there is little evidence of this type of ...fluence. The most impressive local gains have been made by moving in ...e opposite direction, that is, creating politically independent decentralized ...stitutions.

...5. While both regions have a background of agrarian economic or...nization conducive to separatism, Guadalajara has made greater progress ...ward achieving a spirit of association. The foregoing points help to explain ...is As a result, the case studies reflect, to a greater extent than in Cali, ...ccessfully realized projects the effects of which can be traced to economic ...velopment rates.

...ONCLUSION: PROPOSITIONS AND THEORETICAL IMPLICATIONS

...he exploratory character of this study would have made it inappropriate ... state certain propositions at the outset with the implication that the ...alysis could "test" them in any meaningful sense of that term. Rather, ...e analysis is couched in a context of discovery where, with the help of a ...articular set of concepts, the objective has been to generate hypotheses ...r subsequent evaluation. With the earlier discussion of concepts in mind, ...t least five propositions may be drawn from the empirical results.

It should be noted that these propositions are about power and do not ...uch on the values or ambitions of actors participating in the decision...aking process. The propositions assume a generalized commitment to ...evelopment on the part of the actors whom they concern. Interview data ...pport the validity of this assumption,[12] although those data and others ...lready mentioned indicate diversity in what are considered the most ...ffective strategies for accomplishing development (i.e., a diversity in de...elopment ideologies). After discussing the propositions, I will return to the ...uestion of values, development ideologies, and their structural correlates.

1. *To the extent that power is the property of authoritative organizations and ...e individuals representing those organizations, the more likely are decisional ...ctivities that promote development. Conversely, to the extent that power is the ...roperty of individuals acting independently of authoritative organizations, the ...ss likely are decisional activities that promote development.*

This proposition refers to the notion of bases of power. The data in...icate that effective decision making in Guadalajara took place in the ...ontext of representative organizations of the state and private sector. ...n Cali such authoritative organizations are rare, and power is more often ...ased on remunerative concerns of regional interests and manipulation by ...gricultural interests.

Following the insightful analysis of Lehman (1969), I suggest that ...ower in Cali is based on *intermember* networks competing over the alloca...ion of resources, while in Guadalajara power is more *systemic*, concerned ...ith formulating and implementing collective goals.

...[12] The questions here dealt with what interviewees considered to be the salient problems ...r the economic development of the area, effective solutions to these problems, and ...onceptions of what the goals of the development process should be.

2. *To the extent that power is broadly distributed among actors who occupy discrete positions in authoritative organizations, the more likely are decisional activities that promote development. Conversely, to the extent that power is narrowly distributed among actors who circulate among top organizational positions, the less likely are decisional activities that promote development.*

In terms of this dimension, a broader distribution of power promotes effective decision making by providing greater access of qualified interests into the development process and giving them a stake in its outcome (e.g., via social mobility). In Guadalajara this meant more participants and supporters.

3. *Within limits, the greater the inequality of power among actors, the more likely are decisional activities that promote development* and conversely.

The data indicated that in Guadalajara the coalition of industrial, commercial, and governmental organizations was unambiguously led by the public sector. This situation minimized dissension and veto power. In Cali power was more equally distributed among public and private organizations; each could and did withhold support from the other and thus guaranteed inaction.

There are, undoubtedly, limits to the marginal utility of power inequality, as, for example, when it is so great as to divorce substantial segments from a stake in the development process.

4. *The greater the coordination of power as reflected in mutual ambition and collaboration of organizations, the more likely are decisional activities that promote development* and conversely.

The case studies indicated that this coordination was, perhaps, the key factor in distinguishing decision-making styles. In large measure, it is a result of differences in the bases of power, its distribution and inequality. In Guadalajara the organizational machinery for collaboration existed and, indeed, provided the most effective alternative for all groups. In Cali collaborative groups are still in their incipient stages, and groups concerned with development frequently have no alternative but to go it alone.

5. *The greater the amount of total power available to actors in the development process, the more likely are decisional activities that promote development* and conversely.

I take this to be an obvious proposition but mention it because the notion of total power is generally ignored in comparative studies of communities and nations. If power is defined as the capacity to mobilize resources and invoke sanctions, there are apparent differences between Cali and Guadalajara. The total amount of power in Guadalajara is substantially greater than in Cali. The data provide both quantitative and qualitative indicators: as resources Guadalajara has a strong public sector and a large number of viable organizations implicated in the development process; as available means for mobilizing these resources there are a variety of collaborative groups; recourse to sanctions is available to the private sector in their ability to give or withhold support to political leaders and in their proclivity to invest; public-sector sanctions are numerous in the control of political personnel and the avenues of public investment.

These conclusions refer, of course, to the question of how power arrangements are variously conducive to economic development. In the comments that introduced this paper I also drew attention to theories of modernization that speculate on the consequences of development for changes in societal power arrangements. Some observations on that subject seem warranted, although they are made in recognition of the cross-sectional nature of the present data and the hazards of inferring change from such evidence.

Although their rates differ, both regions have experienced economic development in recent years. If the foregoing analysis helps to account for differences in the rates, according to theories of modernization the regions should still reflect similarities or common directional changes in the organization of power. Our expectations in that regard would be heightened by the fact that both regions share what are generally regarded as experiences conducive to modernization, that is, the transition of an agrarian to an industrial economy, rapid urbanization, and rapid expansion of commercial and services sectors.

But, as we have seen, these changes have been accompanied by important differences in the organization of power. How are these differences to be explained and what are their implications for theories of modernization? A few concluding remarks will attempt to answer that question.

In Cali industrialization and commercial growth have occurred in the absence of structural changes in the rural or agricultural sector. In fact, many large agricultural interests have moved into industry ownership (along with nonlocal interests), especially in the industrialization of agricultural products, without abandoning their agricultural holdings. Simultaneously, political instability (or at least gradual political development) has prevented the development of strong political institutions (especially at the regional and local level) as principal power holders. As a result, the economic development that has occurred has not been accompanied by those changes in the organization of power anticipated by modernization theory, that is, a broader distribution of power, democratization, etc. Rather, in the case of Cali, older elite structures (perhaps "traditional" ones) have been modified to meet some of the exigencies of an urban-industrial economy, but, in other respects, they continue to subscribe to the values of development through separatism or self-sufficiency, the ideologies of regionalism and traditional land-tenure systems, and the practices of elite rule.

Industrialization in Guadalajara occurred subsequent to revolutionary changes in rural property relationships; top industrialists are "new men of power" without agrarian origins or economic interests. Similarly, fifty years of postrevolutionary struggle to stabilize political institutions have produced a powerful and authoritative state. As a result, development has been accompanied by changes in the organization of power and, particularly, by a broadening base of participation in decision making under the direction of the state. These changes have not, however, led to significant democratization. The one-party state commands most areas of

national life and can act in a decidedly undemocratic fashion when it feels its interests are being threatened. In Guadalajara power is organized in what may fairly be called an elite, but one that is open, particularly to the representatives of political and industrial organizations. In these circles separatist values are slowly giving way to a spirit of association, ideologies are consistently in support of modernization Mexican style (i.e., through a federally planned economy), and decision making is increasingly a product of organizational cooperation.

For theories of modernization these observations imply that adaptation and accommodation to higher levels of development may take many forms as regards the organization of societal power. The small amount of evidence contributed by this study suggests that the changes may be quite varied and are best understood as consequences of when and under what historical circumstances development takes place.

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Simon out of Homans by Coleman[1]

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Simon's linear model for some of Homans's propositions about sm groups is imbedded in a more general system of coupled linear differe tial equations in group averages as variables. It is successfully tra lated into differential equations about flows of proportions of m among cells in a cross-classification, equations adapted from Co man's *Introduction to Mathematical Sociology*. Simon's unmeasural averages are operationalized as the marginals in the 2 × 2 table a can be found directly from two coupled equations in the marginals, the rate parameters satisfy certain constraints. An additional inc pendent equation reflects a correlation of attributes across individu not considered by Simon. Several ways to estimate parameters a test the model are discussed.

Homans (1950) teased out of empirical studies of small groups a set propositions relating interaction, friendliness, and activity in terms of t level of output required by the environment. He did much else—delv into the effects of status, the architecture of roles, perception, etc.—b Simon (1952) settled for the average levels of the first four "quantities" building a model. Coupled linear differential equations are his first transl tion of Homans's interrelations.[2] Simon goes on to a dazzling derivation much from almost nothing, showing that linearity in the equations is n necessary to the fundamental qualitative conclusions about viable equilib um states. The sore spot throughout is the lack of any suggestion on how measure the four variables. Most model builders when shod in operation variables will cheerfully carry the cross of linearity—perhaps too cheerfull Coleman's monograph (1964) provides some leather.

Coleman's core idea has three parts:[3] use proportions of individuals wi given attributes as state variables, represent causal interrelations in tern of rates of flow among cells in a cross-classification by different attribute and focus on instantaneous rates—differential calculus instead of the di crete time approach—so that most of the rates can be set at zero a prio The latter two parts distinguish his from most earlier models of movemen among attributes.[4] Coleman aims for the economy and clarity of random

[1] Financial support under grant GS-448 from the National Science Foundation is grat fully acknowledged. Students in a course on mathematical models, especially Jol Fitts and Paul Levitt, made valuable contributions.

[2] In footnotes and text Simon cogently discusses both what he does and what he does no utilize from Homans in the actual model.

[3] This is my assessment and may not be shared by others; chapters 4 and 5 of Colema (1964) are the core of his work for this interpretation.

[4] Most notably, models for predicting the evolution of voting. Coleman himself draws th contrast with earlier models (e.g., Coleman 1964, p. 53).

walk models and avoids the proliferation of parameters in Markov chain models (see Feller 1968). Coleman emphasizes stochastic interpretations of his models, but the core idea fits as well into a determinist model for aggregates.[5]

Simon's equations serve as guides in structuring a Coleman model for flows of individuals. There is no guarantee that every detail in Simon's interpretation of Homans will be consistent with a model for flows of individuals in an attribute space. Step by step, the most general set of linear differential equations compatible with Homans's topic will be specialized until Simon's particular equations emerge. It will be easy, if necessary, to alter Simon's equations.

Simon's linear model will be extended to include statements about individuals and thus about correlations of attributes over individuals, by interpreting each variable as the proportion of individuals with a given attribute. No longer is the sole concern in tracing the consequences of the set of postulates Simon finds in Homans. A successful search is made for a set of postulates about individual behavior which yield these postulates about group averages.

Operationalizing the model remains the central contribution. Not only must the variables be measurable, as proportions, but also the parameters must be few enough to be manageable. A useful by-product is to show the form a Coleman model of a cross-classification must take to yield valid dynamic equations in terms of marginals alone, here the equations of the Simon-Homans model. Results for correlations are then additional to, rather than subversive of, equations in group averages, and they permit additional tests of the model.

SIMON'S MODEL AS A SPECIAL CASE

Simon extracts from Homans the idea of mutual interrelations among the levels of friendship, interaction, and activity in a concrete group of people subject to very strong pressure from the environment to carry out some level of purposeful activity. Neither proposes measures for these variables, denoted F, I, A, and E, respectively. Simon (1952, 3d sec.) shows how mere ordinal scales for the variables are sufficient to derive useful results about equilibria and paths of change from a nonlinear model stipulating only qualitative functional relations among the variables. Even ordinal scales for group levels, however, could only be constructed as averages of variables and interactions for individuals if the latter were given as cardinal measures (see Simon 1957, p. 100, last paragraph). One may as well assume cardinal measures, and in the next section operational definitions are proposed.

Like Homans, Simon assumes that the group does not instantly reach equilibrium so that paths over time must be specified. Simon goes beyond

[5] Stochastic interpretation provides a natural framework for assessing deviations between predicted and observed averages. It is hard, in any case, to conceive of behavior in a small group as having no chance components. Examples of sophisticated uses of stochastic aspects of a model, treated as integral with the model, can be found in Goodman (1962, 1964).

Homans to assume that, given cardinal measures of the group levels, relations among these variables are linear. Moreover, Simon assumes t rates of change are determined by the levels of the four group variable the preceding instant—memory, history, and anticipations play no in pendent role.

Make the simplest possible assumption: the rate of change of e variable equals the sum of all four variables, each multiplied by so constant parameter. The trick is in specifying the signs and relati among parameters.

1. Since E by definition is arbitrary, imposed from the outside, e parameter in the equation for dE/dt is zero, and the equation can be ignor

2. Each other variable if left to itself—all other variables being zer will dwindle to zero. That is, people are intrinsically inert, at least in groups studied; they cannot sustain any level of activity, friendship, interaction just for its own sake. Hence in the equation for rate of chang each variable, the coefficient of that variable in the sum on the right sid negative.

3. The effect of each other variable on the rate of change of a given depends on how far the two existing levels are from being in harmo Harmony means being in a given ratio, and the given variable changes so to tend to return to that ratio, with a speed proportional to the deviati from that ratio. Harmony between two variables may be one ratio wh viewed by the first, in *its* rate-of-change equation, and a different ra when viewed by the second. Another, simpler way to put the matter is th in the equation for rate of change of a given variable the coefficients of *other* variables on the right are positive; this, together with point 2, mediately permits one to gather terms as follows:

$$\frac{dF}{dt} = b(I - \beta F) + b_1(A - \beta_1 F) + b_2(E - \beta_2 F) \,, \qquad ($$

$$\frac{dA}{dt} = c(I - \gamma' A) + c_1(F - \gamma A) + c_2(E - \gamma'' A) \,, \qquad ($$

$$\frac{dI}{dt} = d(F - \delta I) + d'(A - \delta_1 I) + d''(E - \delta_2 I) \,. \qquad ($$

Points 2 and 3 state in effect that all coefficients in these equations a positive. The English letter coefficients outside the parentheses determi speed of adjustment. The Greek letter coefficients reflect the "harmon levels: note that the harmony ratio $A/F = \beta_1$ need not be the same as t other harmony ratio $A/F = 1/\gamma$.

Substantive insight is required beyond these general ideas for any set interdependent variables. Simon in effect extracts from Homans's text t following restrictions on parameters:

4. The rates d and d' can be treated as infinite: that is, the level of inte action adapts extremely quickly compared with activity and friendsh levels.

5. The rate d'' is zero: that is, the rate of talking and other interaction is not directly responsive to the externally imposed level of activity E.

From points 4 and 5 it follows that I will instantaneously adapt to the levels of F and A in such a way as to make the right side of equation (3) equal zero. Express this as a new equation,

$$I = a_1F + a_2A \ , \tag{4}$$

where the a's are just new names for combinations of coefficients; for example, $a_2 = d'/(\delta + \delta')d$.

6. The rates b_1 and b_2 are zero. This is Simon's crucial step in specifying the causal order among the variables as Homans discusses them. Neither imposed activity level or actual activity level directly affects the change in friendliness. Thus interaction is the (sole) intervening variable through which activity affects friendliness.

7. Next, $\gamma'' = 1$. (Since E and A are both activity levels, γ'', unlike other Greek letters, need not contain a conversion from one kind of unit to another.) "Malingering factor" is a reasonable name for γ''; a squad of city street repairmen in Boston would surely have $\gamma'' > 1$, whereas one would hope a graduate seminar would have $\gamma'' < 1$.

8. Finally, $\gamma' = 0$: that is, the group's activity level is not directly responsive to the level of interaction.

Points 6–8 plus equation (4) simplify equations (1) and (2) to the form Simon (1952, eqs. 1.1–1.3) proposes from the beginning (and with the same notation):

$$\frac{dF}{dt} = ba_2A - b(\beta - a_1)F \ , \tag{5}$$

$$\frac{dA}{dt} = c_1(F - \gamma A) + c_2(E - A) \ . \tag{6}$$

Since there are no operational definitions of the variables, much less any estimates of the parameters, it is silly to derive the detailed path followed by the variables from the initial state, specified fully by F and A at time zero. Instead Simon first proves there can never be an oscillation in the time path given merely that all the parameters are indeed positive. Then he shows the variables will settle at some equilibrium values, instead of soaring up indefinitely, if and only if

$$(\beta - a_1)(c_1\gamma + c_2) > a_2c_1 \ . \tag{7}$$

Equation (7) can be stated in an intuitively plausible way: the geometric average of the damping rates must exceed the geometric average of the cross-excitation rates. Note that the imposed activity E does not figure, nor does the rate b.

The equilibrium levels of A and F (and thence I) are proportional to E as expected. If nothing is required of a group, it becomes completely inert. If required activity is doubled from a given level, activity, friendliness, and interaction double. The equations are easy to derive:

$$A_o = \frac{c_2(\beta - a_1)}{(c_1\gamma + c_2)(\beta - a_1) - c_1 a_2} E \tag{8}$$

and

$$F_o = \frac{a_2}{\beta - a_1} A_o . \tag{9}$$

Simon attaches plausible labels to parameters—for example, $1/\gamma$ measures "spontaneity"—and shows how various changes in parameters produce the kinds of changes in equilibrium values one would expect and can often find in Homans's descriptions. Simon emphasizes the comparison of A_o and E the only two variables with the same units, and denotes $A_o > E$ as a situation of "positive morale." This discussion of the requirements for and effects of positive morale seems shaky because it depends crucially on assumption 7, which would itself seem to be plausible only for medium levels of morale.

A MODEL FOR PROPORTIONS WITH CORRELATION

The simplest possible way to operationalize average variables for a group is to equate each with the proportion of the group that has a corresponding attribute. Individuals are dichotomized as having or not having the attribute; naturally, information about differences among individuals may be lost in this simplification. Hereafter interpret A, F, and I as such proportions.

A new dimension obtrudes itself: correlation. Simon's model says activity and friendliness mutually influence one another as averages, and it seems implausible that possession of one attribute by an individual would not influence the likelihood of his having other attributes. At a deeper level one would argue for contextual effects in which the state of each individual is influenced by the number and proportion of others which have each attribute (see Coleman 1964, sec. 11.6). Here only the minimal assumption is investigated, so that individuals change independently of one another. Can the average interrelations Homans describes and Simon formalizes be the aggregate result?

My main goal is developing, in Coleman's words (1964, pp. 105–6), "a model which has precisely the characteristics for problems involving discrete states that the usual differential-equations model has for problems involving continuous variables"—that is, a model which derives from a conception of causal relations acting through time. Here E is an arbitrary exogenous force and I, although at the center of the causal nexus, adapts so fast that one need treat explicitly only the dynamics of A and F. Variable E is the external driving force, F is the internal driving force, and A is the measure of performance and in a sense the dependent variable, while I reflects intervening mechanisms and can be treated as a hidden variable. (Coleman [1964, pp. 123–27] at one point sketches a model for Homans's propositions relating just friendliness and interaction, but it seems clear he

made this awkward choice in order to tie the discussion to his own data on friendship and interaction among printers.)

Figure 1 reproduces Coleman's most general diagram (1964, p. 124) for flow rates of persons among cells in a 2 × 2 table. Treat friendliness and activity as dichotomous attributes, the former present when in the upper half and the latter when in the left half of the plane.[6] The rate q_{12}, for example, is for men in cell 1 moving to cell 2, that is, changing from the state of being active and friendly to that of being active and nonfriendly. The essential point is the lack of diagonal arrows: there is no chance of changing both attributes simultaneously.

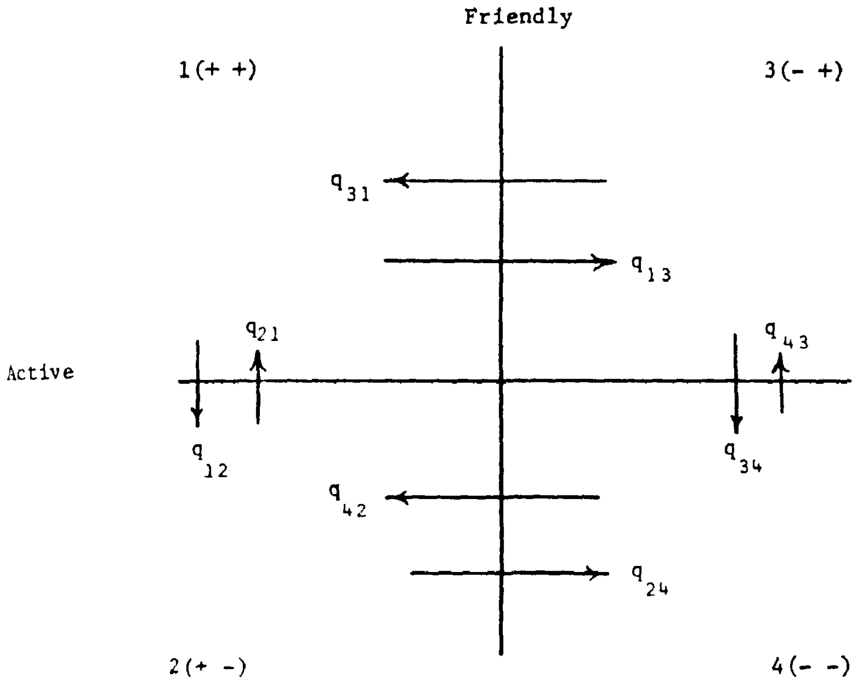


FIG. 1 —Rate parameters in the general case; from Coleman (1964, p. 124, labels supplied).

Let the fraction of men, or the probability of a man being in state i be labelled p_i. It is easy to write down the equations for figure 1; a typical one is

$$\frac{dp_1}{dt} = -(q_{12} + q_{13})p_1 + q_{21}p_2 + q_{31}p_3 . \qquad (10)$$

Only three are needed, since

$$p_1 + p_2 + p_3 + p_4 = 1 , \qquad (11)$$

[6] The cells might better be represented by four points, corners of a square, as in a random-walk model. One cannot assume the same model could describe moves of persons among quadrants if the attributes were truly continuous variables; I failed to find any bivariate distribution which permitted such an assumption.

and this equation can be used to eliminate, say, p_4 in the other three equations. The operational definitions of F and A are

$$F = p_1 + p_3 \quad \text{and} \quad A = p_1 + p_2 . \tag{12}$$

Through combinations of equations one obtains

$$\frac{dF}{dt} = -(q_{12} + q_{43})p_1 - (q_{34} + q_{43})p_3 + (q_{21} - q_{43})p_2 + q_{43} , \tag{13}$$

$$\frac{dA}{dt} = -(q_{13} + q_{42})p_1 - (q_{24} + q_{42})p_2 + (q_{31} - q_{42})p_3 + q_{42} . \tag{14}$$

To match equation (13) with equation (5), it must be possible to group all terms on the right into a constant times the sum of p_1 and p_2 and another constant times $(p_1 + p_3)$. Inspection shows rates must be constrained as follows:

$$q_{34} = q_{12} + q_{21} \tag{15}$$

and

$$q_{43} = 0 . \tag{16}$$

Equation (16) is required because there is no exogenous term in equation (5). To match equation (14) with equation (6), inspection shows

$$q_{24} + q_{42} = q_{13} + q_{31} \tag{17}$$

and

$$q_{42} = c_2 E \tag{18}$$

must hold. Equations (15)–(17) say that the sum of the opposed rates (absolute values) across an axis in figure 1 must be the same on both halves of the axis. It is convenient to relabel some rates in a manner parallel to Coleman's usage (1966, p. 169):

$$q_{31} = q_{42} + \theta , \tag{19}$$

$$q_{24} = q_{13} + \theta . \tag{20}$$

Five independent parameters remain. There were eight independent rate parameters in the general case of figure 1.[7] The special case which must hold for Simon's equations to be consistent with the equations for proportions is shown in figure 2. Equations (5) and (6) become in the new notation

$$\frac{dF}{dt} = q_{21} A - q_{34} F \tag{21}$$

$$\frac{dA}{dt} = \theta F - (q_{13} + q_{12} + \theta) A + q_{42} . \tag{22}$$

From (22) it is clear that θ must be positive.

[7] Coleman (1964, p. 162) calls this the "opposing effects" case. The other case Coleman singles out, "presence and absence," does not hold here—it would, for example, require $q_{24} = q_{13}$ instead of equation (20).

A final, more subtle restriction becomes apparent from equation (22). The rm not proportional to a variable, namely, q_{42}, is proportional to E; yet he coefficient of A, which contains q_{42}, must be independent of E to conform equation (6), for the Simon model. Hence one must assume q_{13} varies in uch a way as to prevent variation with E of the coefficient of A.[8] One nterpretation is that persons have a fixed total capacity for change on the

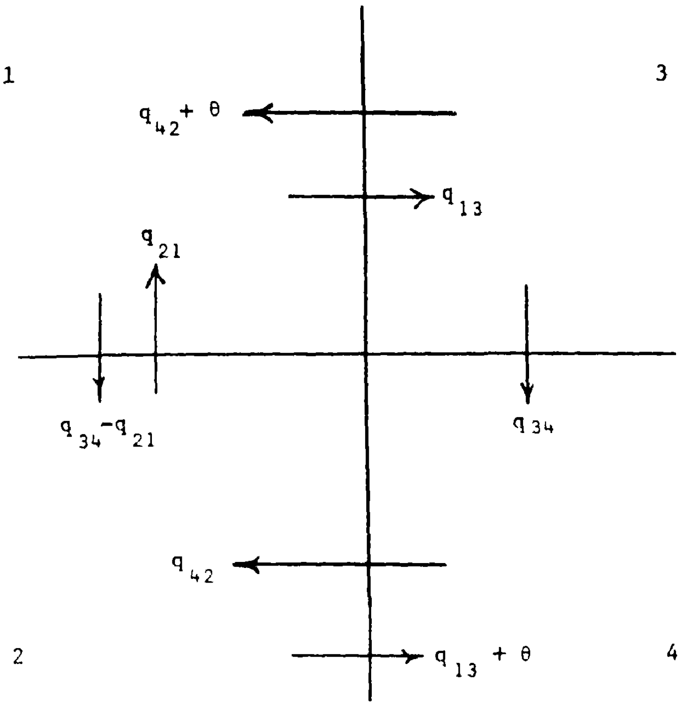


FIG. 2—Rate parameters which yield the Simon equations in marginal totals. The variable q_{12} is proportional to the external level of activity E imposed, and q_{13} must change when E changes so as to keep fixed the sum $q_{42} + q_{13} + \theta$ (call it T).

A attribute so that, if external forces build up the rate in one direction (equation [18]), the rate in the other is decreased commensurately.

The parameter θ represents interaction effect; one more quickly changes from inactive to active when friendly than otherwise, and also one less quickly changes from active to inactive when not friendly than when friendly. The parameter q_{21} is parallel to θ; it represents the interaction effect of activity level on rate of change of friendliness state. In the absence of external forces and interaction effects, all movements in figure 2 would

[8] The problem is not with the linearity of the equations: E as an exogenous level can be treated much like a parameter, as long as it does not vary rapidly, but the model then would become hopelessly complex.

be down or to the right toward complete absence of activity and friendliness.
Expressions for parameters in terms of Simon's constants are clear:

$$q_{21} = ba_2\,, \quad q_{34} = b(\beta - a_1)\,, \quad \theta = c_1\,, \\ T = c_2 + c_1\gamma\,, \quad \text{and} \quad q_{42} = c_2E\,, \tag{23}$$

where $T \equiv q_{42} + q_{13} + \theta$. But the new parameters must be interpreted in the context of proportions with correlation, not averages of continuous variables in different units. Simon's condition for stability, equation (7), carries over and becomes in translation

$$q_{34}(q_{13} + q_{42} + \theta) > q_{21}\theta\,. \tag{24}$$

This is a tautology in the new model, since $q_{34} > q_{21}$ is required (equation [15]) if all the rate parameters q_{ij} are to be positive. Instability in Simon's sense is meaningless, since A and F must by their definition as proportions remain between 0 and 1. The equilibrium equations (8) and (9) for Simon carry over into

$$A_o = \frac{q_{42}q_{34}}{[q_{34}(q_{13} + q_{42}) + \theta(q_{34} - q_{21})]} \tag{25}$$

and

$$F_o = \frac{q_{21}}{q_{34}}\,A_o\,. \tag{26}$$

These predicted equilibrium sizes are always between 0 and 1, as required. The fact that A and F cannot tend to increase without limit even in extreme circumstances is a limitation of the new model.

When Simon's variables are identified with marginal totals in a cross-tabulation of men on activity and friendliness, his equations can be recovered from equations for proportions in the cross-tabulation. Instead of Simon's seven parameters, there are five independent transition parameters. These must be positive and must combine into seven positive rates between states, as shown in figure 2; also, the sum $q_{42} + q_{13} + \theta$ must be a constant independent of the rate of activity E imposed from outside, whereas q_{42} is proportional to E. Instability, like oscillation, is impossible in this new form of the model, wherein the state variables are pure numbers confined between zero and 1.

To compute the correlation between attributes over individuals, one needs the proportions in single cells. Equilibrium levels (as well as time paths) of F and A, the marginals, are already determined; so, as in any 2×2 table, only one cell entry, say p_1, is undetermined. From equation 10, in equilibrium

$$(q_{34} - q_{21} + q_{13})p_1 = q_{21}p_2 + (q_{42} + \theta)p_3\,. \tag{27}$$

Substitutions from equation (12) lead to

$$p_1 = \frac{q_{21}}{q_{34}}\left(1 - \frac{q_{13}}{T + q_{34}}\right)A_o\,. \tag{28}$$

If the correlation were zero, p_1 in equilibrium would be just the product of F_o and A_o.[9] Comparison of equations (28) and (26) makes it clear that correlation will not be zero in general.

DISCUSSION

Estimates of parameters and tests of the new model will be most convincing when based on observations of changes of state by all individuals in the group during very short periods.[10] Bales (1951) has shown how to code reliably the stream of communicating flashes in a small group as friendly (or hostile, neutral, etc.) and according to target of the interaction; presumably one could code instantaneous changes in attitudes and activity of these individuals with some reliability.[11] Joel Cohen (1968) reports this kind of observation: he judged change in membership in small play groups in a nursery every thirty seconds from a judgment of mutual orientation as well as physical proximity.

Questionnaires are the most common and possibly most reliable way to assess attitudes. Then estimates and tests would have to be made more indirectly because data could be gathered only at considerable intervals, in a panel study. The hypothesized absence of diagonal rates in figures 1 and 2 could not be tested directly, and the other rates would not be simply proportional to observed turnover components in panel data.

The easiest but most limited tests and estimates would use only observation of the proportions p_i in equilibrium,[12] that is, of A_o, F_o, and p_1—equations (25), (26), and (28). The proportionality between q_{42} and E (eq. [18]), together with the independence between E and the coefficient of A insisted upon in equation (22), could be tested by seeing if A_o were indeed simply proportional to E as stated in equation (25). There would remain the difficult problem discussed by Simon (1957, p. 100, n. 3) of estimating E numerically: one estimate might be the fraction of men who perceive the environment as requiring activity of the group. There would remain the task of estimating five independent parameters, one now being q_{42}/E rather than q_{42}. The three equations (25), (26), and (28) can yield estimates only of

[9] In a 2 × 2 table a useful measure of association which is independent of the marginals is

$$\nu = \frac{p_1 p_4}{p_2 p_3}.$$

(See Levine 1967; Mosteller 1968.) From equations (11) and (12), ν can be expressed in terms of p_1 together with F_o and A_o (and thence E).

[10] The essence of the difference between the new model and Simon's is that the former assumes individuals are changing constantly even though in the aggregate the proportions in different cells may stay near equilibrium values. Correlations across individuals do not appear in Simon's model because individuals are thought to reach equilibrium (though each at different levels of the variables).

[11] The fundamental crudeness of the model, in either the new form or Simon's form, is manifest in their reduction of interaction phenomena to variables on individuals.

[12] This is the familiar method of comparative statics (see Simon 1957, p. 105).

three combinations of parameters—variation of E would yield only a test of whether A_o, F_o, and p were each proportional to E as hypothesized.

One additional assumption of some plausibility would reduce the independent parameters required in the three equations for equilibrium to three. Suppose the total rate of movement in both directions across the activity boundary, the same for both levels of friendliness, is the same as q_{34}, the corresponding total rate across the friendliness boundary in figure 2. Divide each parameter by this common total, and indicate this normalization by a bar over the symbol. Then from equation (26) $\bar{q}_{21}$ can be estimated

$$F_o = \bar{q}_{21} A_o \; ; \tag{29}$$

and thence from equation (28) $\bar{q}_{13}$ can be estimated:

$$p_1 = \bar{q}_{21}\left(1 - \frac{\bar{q}_{13}}{2}\right) A_o \, . \tag{30}$$

The remaining parameter $\bar{q}_{42}$ can then be extracted from (25):

$$A_o = \frac{\bar{q}_{42}}{1 - (1 - \bar{q}_{13} - \bar{q}_{42})\bar{q}_{21}} \, . \tag{31}$$

It will surely happen with many types of groups that the model is not valid. A return to the successive special assumptions listed earlier in specifying Simon's model may suggest ways to vary and enlarge the scope of the model.

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STATUS DISCREPANCY AND PREJUDICE RECONSIDERED

Donald Treiman ("Status Discrepancy and Prejudice," *American Journal of Sociology* 71 [May 1966]: 651–66) evaluated the utility of the status consistency concept in explaining levels of prejudice and found it to be of little value. However, two defects prevent this from constituting an adequate test. First, status consistency was measured by comparing the respondent's educational level with the level of total family income. Family income should not be treated as an individual status measure which might be expected to be consistent with education. There are norms in American society that lead to the expectation that individual income should be positively associated with level of education. There is no norm leading to the expectation that total family income (dependent upon the number of employed persons in the family and the various amounts of their income) should be related to the education of the family head.

The second defect in Treiman's study would hold even if total family income were a valid dimension to be used in measuring status consistency. This is a result of the manner in which Treiman measured consistency. He constructed a sixteen-cell table by dividing family income and education into four levels each. Cells on the principal diagonal running from high-high to low-low were labeled consistent and all other cells were labeled inconsistent.

This procedure appears reasonable at first glance, but it bears closer examination. The traditional method of giving cumulative percentile scores to status categories produces the relationship presented in table 1. Each category receives a percentile rank score equal to one-half the percentage included in that category plus the total percentage of respondents in lower ranked categories.

The discrepancy in status scores between the second highest income and the highest education rank is the same as the discrepancy between the second highest rank of each dimension (0.125) yet the former combination is classified as inconsistent and the latter as consistent. Similarly, the discrepancy in status scores for the third highest income and the second highest education rank is less than the discrepancy for the second highest rank of each dimension (0.105–0.125), but the former is classified as inconsistent and the latter as consistent. One might argue that the discrepancy between the lowest income and the third highest education rank (0.190) is sufficiently small that this cell should be considered consistent. The exact cutting point between consistent and inconsistent is always arbitrarily chosen, but error is introduced whenever a status combination classified inconsistent is equally or less discrepant than other combinations classified consistent

Table 2 uses data presented by Treiman on differences between actual prointegration means and those predicted by his regression equation. A negative sign indicates a prejudiced bias for the cell and a positive sign a

nonprejudiced bias. Using a status discrepancy of 0.200 as the cutti point between consistent and inconsistent cells, seven cells emerge as co sistent and nine as inconsistent. Four of the seven consistent cells show nonprejudiced bias with a weighted average deviation for the seven ce of +0.11. Seven of the nine inconsistent cells show a prejudiced bias wi

TABLE 1

STATUS DISCREPANCY VALUES FOR VARIOUS COMBINATIONS OF EDUCATION AND FAMILY INCOME

Level of Education	Total Family Income			
	.920	.760	.530	.190
.885...	.035*	.125	.355	.695
.635...	.285	.125*	.105	.445
.380...	540	.380	.150*	.190
.130...	.790	.630	.400	.060*

* Those cells originally classified as status consistent. All others were classified as inconsistent. Cell entries represent discrepancies between status scores for education and family income.

TABLE 2

DISCREPANCY BETWEEN PREDICTED AND ACTUAL PROINTEGRATION MEANS BY STATUS CONSISTENCY

Level of Education	Total Family Income			
	.920	.760	.530	.190
.885...	+.10 (89)*	+ 49 (55)*	−.15 (95)	−.56 (45)
.635...	−.21 (56)	−.11 (68)*	+.20 (111)*	− 16 (86)
.380..	− 32 (29)	− 54 (37)	−.16 (91)*	+.37 (120)*
.130...	+ 65 (17)	+.02 (26)	− 09 (75)	− 30 (189)*

NOTE.—Numbers enclosed in parentheses are cell sizes.
* Indicates cells classified as status consistent.

a weighted average deviation for the nine cells of −0.19 (the two excep tions are the cells with the smallest N's). Seven correct predictions in nin attempts is suggestive of the possible significance of status inconsistenc in the causal nexus producing prejudice.

Treiman is correct in stating that general status levels are positivel associated with prointegration sentiments. An alternative technique fo determining whether sentiments are the result of additive or interactio effects is to average the status values of the two dimensions at each ce

intersection. I ranked the cells by average status scores and by mean prointegration scores (data available upon request) and used the same consistency classification as presented in table 2. The prointegration rank is higher for the status consistent (mean rank deviation of +1.43) and lower for the status inconsistent cells (mean rank deviation of −1.11) than would be expected if prointegration sentiments resulted solely from general status. There is similar variation within the inconsistent cells. There is a mean rank deviation of +1.00 for inconsistents whose income level exceeds their educational level and of −2.10 for those whose income level is lower than their educational level. Thus, status consistent persons possess higher mean prointegration ranks than would be predicted by their status ranks; status inconsistents whose income level is higher than their educational level have a lesser tendency in the same direction; and status inconsistents whose income level is lower than their educational level deviate in the direction of lower prointegration ranks than would be predicted from their status ranks. I have provided (Geschwender 1967, pp. 169, 171) a rationale which might explain the development of prejudice in persons with this status profile but which suggests that other profiles may be more productive of prejudice.

It must be concluded that Treiman has not demonstrated that the status consistency concept is an inadequate predictor of prejudice. It is difficult to justify using total income as if it were an individual status attribute normatively expected to vary with level of education. Even if total family income were a valid individual status attribute, the manner of classifying respondents as consistent or inconsistent has serious defects. Once these defects are remedied, these data indicate some relationship between consistency and prointegration sentiments—or, conversely, inconsistency and prejudice—as well as variation by pattern of inconsistency.

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Book Reviews

Violence in America: Historical and Comparative Perspectives. Edited by Hugh Davis Graham and Ted Robert Gurr. A report submitted to the National Commission on the Causes and Prevention of Violence. Special introduction by John Herbers. New York: Frederick A. Praeger, Inc., 1969. Pp. xxxvi+822. $11.95.

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This is the rare instance of a volume serving well both popular and scholarly ends. Nowhere before has there been such diverse and extensive documentation of the ubiquitous part violence has played in our national history. Richard Brown's chapter recounting the many occasions in American history when violence took center stage presents the popular message in capsule form. The well-chosen group of experts who assembled the evidence in such special areas as labor strife, racial violence, immigration and the frontier, and economic and political development, have put forward many useful hypotheses regarding the incidence and extent of violence in diverse settings. In a concluding chapter Gurr and Graham cautiously summarize the conclusions to be drawn from the individual essays. But the function of this book is not so much to produce overall conclusions as to implant the fact of violence so strongly in popular and scholarly awareness that the myth of a naturally peaceful society only occasionally disturbed by alien forces can never again be an assumption to shape our view of current events.

In spite of a few "cute" or fragmentary papers, the volume contains a remarkable number of essays that combine provocative thinking with conscientious scholarship. Charles Tilly translates Hobsbaum's conceptualization of protest into a typology of primitive, reactionary, and modern collective violence, the latter stemming from the associational society and the nation-state. Richard Maxwell's exhaustive and thoughtful essay on the American vigilante tradition will undoubtedly be the definitive short work on this topic for years. A slight bias toward seeing vigilantism in society-building terms perhaps accounts for the one serious failure to examine the Southern lynching tradition as our nation's most important vigilante movement. Philip Taft and Philip Ross carefully abstract the record of violence from the history of organized labor, and Morris Janowitz's examination of the trend of racial violence from *communal* to *commodity* and to an emerging *political* form offers controversial but cogent speculation concerning the future. Roger Lane's resourceful exploitation of Massachusetts crime statistics makes a convincing case for the view that urbanization leads to rising standards for law and order, giving rise to the faulty impression of soaring crime rates. Raymond Tanter carefully plots internal violence against the duration and escalation of the Vietnam War to call into question simple assumptions about the relationship between internal and external violence, and to suggest complex connections with changing rates of external violence. By sophisticated analyses of data regarding civil violence in many contemporary nations, Ted Gurr shows that level of violence is a function of degree of deprivation, legitimacy of the political system, and consistency in the exercise of coercive force by the state; and Ivo and Rosalind Feierabend and Betty Nesvold show

that high rates of violence characterize states that are transitional in the modernization process. Edward Gude formulates a theory of revolution centering on the enforcement of legality in a manner that undermines legitimacy of the government, and illustrates the theory with the contrasting control strategies of Batista and Betancourt.

While underscoring the place of violence in America, the volume also shows that America is neither the only nor the most violent nation. While linking violence to Southern and frontier cultural traditions, the volume repeatedly suggests that violence should be understood as the response to specifiable kinds of social situations and ecological conditions. While generally eschewing evaluation of the effectiveness of violence in comparison with other available methods for promoting change or establishing order, the authors do occasionally ask whether violence is instrumental or epiphenomenal, and reach opposite conclusions. Perspectives range from treating violence as an expected response and wondering why there has been so little mob action against war (Robin Brooks) to the more frequent attempt to explain why violence does occur. The editors have done an unparalleled job in accommodating these divergent approaches and topics, and manage to keep the entire volume attuned to practical questions yet remarkably free from polemics.

In spite of the length and diversity of the volume, the reviewer was puzzled over some omissions. First, if most violence occurs in one-to-one relationships in primary group settings, how is it possible to avoid some searching analysis of these phenomena in a history of violence? Just as the political assassination by a lone person is harder to anticipate and prevent than conspiratorial and collective violence, so violence within the family poses an especially difficult and persistent problem. Could it be that a concern with the body politic still transcends our concern for human life when we abhor violence? Second, it is strange that the volume includes no systematic treatment of the use of legitimate violence and the threat of violence, especially by the agents of the law. The accepted right of every citizen to protect his property against trespassers, violently if necessary, has an important history in America. And several of the essays indicate that the character of police response is crucial in determining the level of violence in various kinds of protest. The history of belief in the right of law officers to employ whatever violence is necessary to enforce laws and apprehend violators deserves intensive study. Third, with the emphasis placed on violence in the course of collective protest, a searching history of successful and unsuccessful efforts to employ deliberately nonviolent strategy would have been a valuable addition.

If we take seriously the editors' conclusions, that "protective resistance to undesirable change has been a more common source of collective violence than 'revolutions of rising expectations' " (p. 805), the volume's most serious deficiency is its failure to assay the outlines of a theory for predicting resistive violence. The de facto analytic framework of the book seeks to explain and predict change-oriented violence, but to take as given—as a matter of voluntary decision—resistive violence and legitimate violence. But since the latter is among the most powerful determinants of the former, the unheralded message of the book is the need for a sequel in which resistive and legitimate violence are subjected to the same penetrating analysis as protest violence.

Now that this valuable work is completed, we should stand back and ask what is gained and lost by focusing on violence rather than on coercion or direct action or some other related concept. Brown's sympathetic portrayal of vigilantism acknowledges the constructive role of violence in some situations. The recently perfected art of employing nonviolence to force groups to choose between submitting to coercion or resorting to violence points up one aspect of this problem. The subcultural bias that places vicious psychological abuse and manipulation of morality within the rules and physical violence outside the rules, can only contribute to collective rule by minorities and ultimately to middle-class hegemony. In many situations violence is simply the recourse of those who cannot afford to wait for the slower techniques of coercion and countercoercion to run their course.

This book is a landmark. It is unlikely that another volume of original essays equal in comprehensiveness and scholarship will soon appear. But the ultimate merit of this work will reveal itself by supplying fruitful issues and hypotheses.

The Lorry Driver. By Peter G. Hollowell. London: Routledge & Kegan Paul, 1968. Pp. vii+263. $6.50.

Working-Class Community: Some General Notions Raised by a Series of Studies in Northern England. By Brian Jackson. New York: Frederick A. Praeger, Inc., 1968. Pp. vii+184. $4.50.

Class, Race, and Labor: Working-Class Consciousness in Detroit. By John C. Leggett. New York: Oxford University Press, 1968. Pp. xvii+252. $7.50.

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These three books deal with two subjects of great interest to contemporary social science, the working class and community. The questions they suggest are probably as critical to the future shape of society as nearly any with which current scholarship is concerned. They are not "question-raising" books in the pretentious sense; each is a small and rather compact empirical excursion that does not attempt to reach much beyond its own specific data and subject matter. Perhaps all the more for this reason, they urge one's attention to their implications for the broader social picture. They prompt, for example, such questions as these: Is there a self-conscious working class today? If so, under what circumstances? How does the concept of community figure in? What does occupational role do to the capacity for community life? What chances are there for community in an urbanized world? And what does community do to transform the lives of those in working-class status?

It may be significant that two of these three books are British in origin. American social science has paid the working class rather scant concern in recent years, its attention having been more occupied, for good reasons, with the situation of other groups, especially ethnic minorities, the very poor, and students. There is no question, however, that the tone of the society in this and other Western nations will be closely related to the dis-

positions of the great "working class" group for some time to come. Backlash phenomena, for example, urge this conclusion, even in affluent America.

The Lorry Driver approaches this network of questions at the most basic sociological level—the level of individual in role and status. It explores the organizational and sociotechnical constraints in the lives of British truck drivers as sources of worker alienation. The occupation is an interesting if not typical one in this respect. The lorry driver tends to put a high value on the function he performs and to believe the requirements of his calling entitle him to the approbation of others. High among the elements of driving that appeal to him is the freedom it affords him in his daily work routine. This freedom, in turn, inhibits his capacity to organize with his fellows on a sustained basis and to interact effectively with the nonoccupational community (including family). At the same time, the technical constraints of his job bring him into conflict with outside reference groups, particularly the general public and employers, and the driver thus feels he is denied his rightful status "mandate." The consequence is ambivalence toward the lorry-driver's life and a degree of alienation, the latter not apparently radical.

The picture is more complicated than we can suggest here, but the failure of community in a highly urbanized industry would seem to be one of its major components. Another side and another level of the problem is illuminated by Brian Jackson's *Working-Class Community.* This low-key volume approaches working-class life through descriptions of a series of sites, chiefly workingmen's and young people's organizations, in a Yorkshire textile city: the brass band, the workingman's club, the mill, the jazz club, the bowling green, etc. Emphasis falls on the character and content of the interactions that typify these various social settings. Most of them illustrate the capacity for community—for mutual values and interests acted upon freely—that is attainable even in a situation of relative deprivation. Concrete examples of the point are many. The mill hands "fix rates" to beat the demands of piecework. The brass bands hold themselves together and compete for musical honors despite lack of middle-class encouragement. Even the Saturday night "riots" demonstrate a kind of spontaneous community in defiance of authority among working-class youth.

The author suggests that in Britain community comes easier among working people than among the middle class, for reasons centering on the character of work, on the cycle of poverty, and on styles of life they reinforce. There is much in this account to remind us of the problems and culture of urban black Americans; in fact, the similarity is uncanny. And, reminiscent of many commentators on the American scene, Jackson raises questions about the implications of his observations for middle-class goals, suggesting that "there is more to be valued in working-class life than was once thought: there are latent qualities which any civilized society might desire." His version of working-class community is overly romanticized, but his proposition cannot be lightly dismissed.

Where the other two books are concerned with individual role and with organization, John Leggett's *Class, Race, and Labor* confronts the question of subjective class identification. Drawing on data from a sample survey taken in Detroit in 1960, it explores the conditions that encourage class consciousness among urban workers, including blacks and people of European ethnic origin. Leggett argues that class consciousness plays a larger part in contemporary social relations than is commonly granted. He par-

ticularly emphasizes the incidence of class identification among the "uprooted," those who are occupationally insecure, and among "marginal" minorities. One upshot of the analysis is the suggestion that class as well as race occupies a major place in the social psychology of the militant urban black worker. Less surely, the author also suggests that in some circumstances class may neutralize racial bias among whites. The possible implications for social organization and action are clear, though we might wish both that the indicators of class consciousness were stronger and that comparable data were available dating from the Detroit riots of 1967.

The concept of community enters with the author's discussion of the role of neighborhood organizations in the promotion of class consciousness. The critical point is that consciousness is higher among those who belong to such groups, that is that community bonds help develop meaning in this aspect of workers' lives. Community organization is instrumental to consciousness, which in turn has political ramifications.

In its own way, each of these volumes makes a contribution to our understanding of the interplay of urbanism and community life. The authors had not set out to tell us whether to anticipate that the working class will inherit the earth or disappear. Whichever we expect, however, if either, the questions of community and of the "common man" will remain with us.

Mass Behavior in Battle and Captivity: The Communist Soldier in the Korean War. Research studies directed by William C. Bradbury. Edited by Samuel M. Meyers and Albert D. Biderman. Chicago: University of Chicago Press, 1968. Pp. xxx+377. $11.00.

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The complicated authorship of this unusual book reflects a complex state of affairs. Early in 1953 the Psychological Warfare Section of the Human Resources Research Office (HumRRO) was asked by U.S. Armed Forces Far East Command to undertake studies of the Chinese and North Korean prisoners of war who were then in the custody of United Nations forces. An interviewing team assembled from the HumRRO staff and from the University of Chicago (the Chicago contingent included Bradbury and Meyers, as well as the late Joseph Lohman and Lloyd Ohlin) reached Korea just after the truce was signed in July. Under the leadership of Bradbury (to whom the book is offered as a belated memorial) the "quick and dirty" interviews with forty-five Chinese and seventy-three Korean prisoners were analyzed and reports prepared for HumRRO. We are tactfully informed of conflict between the experimentalist research style of HumRRO, which had to put its *imprimatur* on the project reports, and the exigencies of the situation that allowed only qualitative analyses.

Issued a decade and a half later, after assiduous effort to declassify the HumRRO reports, the book has the limitations of its origins—but merits publication as unique documentation of Communist Chinese and Korean behavior in the only direct military confrontation that the United States has sustained with Chinese communism. In the social science lore of the Korean War, in which the alleged misbehavior of American prisoners became a cause célèbre, it joins Robert J. Lifton's *Thought Reform and the*

Psychology of Totalism (New York, 1961), Edgar H. Schein's *Coercive Persuasion* (New York, 1961), and Albert Biderman's own *March to Calumny* (New York, 1963). As in Alexander L. George's *The Chinese Communist Army in Action* (New York, 1967), however, the story is that of soldiers from the other side, among whom 14,325 out of 21,014 of the Chinese soldiers captured refused to be repatriated, as compared with the 22 American defectors out of 4,450 POWs.

The historical account of the widespread violent disturbances in the prison camps seems dependable and well documented; the unprecedented rate of defection of Chinese and Korean prisoners is interpreted primarily in terms of effective organization and extreme pressure on the part of prisoner groups. Apart from a useful full-length case study of a Chinese anti-Communist who underwent thought reform, the chapters that focus specifically on the motivations of Chinese Communist soldiers are less satisfying, though still of considerable interest. As informal integrations of interview data, they leave us relatively dependent on the judgment of their authors rather than upon public data. And in some essential matters of interpretation it is hard to know how far the authors are to be trusted. Thus, in discussing Chinese responses to ideological pressure in battle and in captivity, the authors make much of the role of traditional Chinese orientations (e.g., toward the establishment of harmonious social relationships, the importance of sharing as a negative sanction, the importance of personal bargaining). We are told by Janowitz (p. viii) that the authors' amateur standing outside the fraternity of "China experts" is advantageous, freeing them from preconceptions that prevailed among this coterie. But the authors repeatedly express their indebtedness to the consultant services of David N. Rowe and Lucien W. Pye, who helped them interpret the interview protocols in the Chinese cultural and political context. To what extent do the reasonable interpretations given arise from the interviews and to what extent are they imposed by the "China experts"? The reader cannot tell.

Although the book cannot be measured very satisfactorily in terms of standards of evidence, no better evidence is available on some matters of enduring interest. In sum, the book adds weight to the skeptical interpretation of "brainwashing" and thought reform, and casts doubt on the extent to which the Chinese strategy of coercive persuasion produced internalized reorganization of loyalty.

Interaction in Families: An Experimental Study of Family Processes and Schizophrenia. By Elliot G. Mishler and Nancy E. Waxler. New York: John Wiley & Sons, 1968. Pp. 436. $11.95.

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It may surprise you to learn that families with normal children use many more fractured sentences in reconciling revealed differences than do families with a schizophrenic child. But, more important, when the joint salience of acts by sequential speakers is considered, normal families are better able to acknowledge the intent and substance of one another's communications,

despite more frequent disruption of sequential order. Chapple would have had us believe that speaking while others were silent was good; these authors suggest that interrupting is the equivalent of being unafraid to exercise control over persons, hence, interrupting is psychiatrically good. The issue may be more complicated, but it is clear that families in which schizophrenia has appeared suddenly tend to have unusually controlled, affect-free interaction.

Such are the findings from the study of forty-nine family interactions over revealed differences. The book is both a report of this investigation and an attempt to promote the use by others of an almost painfully compulsive approach to the analysis of family interaction data. In addition to their own innovations, the volume contains materials from the research cultures of several other laboratories. The volume is so soberly done that it might well become a standard reference. While this is in some degree merited, one must also ask if such highly controlled, affect-free, self-righteous approaches to interaction data are any better for family study than for family living. One is curious: what part of their analysis is ritual, what part necessary?

Other authors are cited, but we do not get from the discussion any idea of what they have accomplished or how the present work builds upon it. For example, Cheek is cited (p. 12) in connection with the logic of having patients (and controls) of both sexes in the design. But later, in the findings section, the author does not tell us whether his data replicate Cheek's findings (high relative participation by girls in schizophrenia-present families). It doesn't (p. 138). The decision to have the families come into the health center to be observed is reported without calling attention to O'Rourke's finding that fathers become more controlling in laboratories than in homes. Great stress is placed on the reliability of scoring, but the investigators do not admit their error in starting with only thirty-eight revealed difference items instead of the fifty or sixty they would have needed to have enough revealed differences to complete their design.

The "what I'm going to say, what I say, what I said" organization of oral communications is not appropriate for a book, but it is not redundancy alone that causes irritation. It is rather that the book is niggardly about releasing information. The authors report only marginal summaries by cells of the design, no correlations or sequential comparisons, and most particularly, no displays of dyadic patterns within the family. A reader feels cheated; he has gone through all the labor of understanding their conventions, he has tolerated all their stuffy and unnecessary writing about the strategy of analysis, and still he must wait for some later book, or books, to find the characteristics of their data which would enable him to view them as a system.

The book is important to sociology as a pilot run of techniques which can later be refined for use with more representative samples. Since the book says so little about the etiology of schizophrenia or the relation between the sessions and daily behavior, one might wonder if it is worth the bother. We suggest that when new questions arise, such as whether community integration helps a family escape the domination of a sick member, the authors' contribution to method will be recognized for its merit outside the unyielding area of the social etiology of schizophrenia in which it is here applied.

Making the Grade. By Howard S. Becker, Blanche Geer, and Everett C. Hughes. New York: John Wiley & Sons, 1968. Pp. 150. $5.95.

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This case study of the academic side of undergraduate life, though beautifully written by the authors of *Boys in White* (Chicago, 1961), adds little to our understanding of how students deal with college life.

Basically, Howard Becker and his colleagues argue that an organization confronts its members with conditions (constraints, rewards, contingencies, and the like) that prove problematic, and since all members are confronted by these conditions, that they work out collective ways of coping with them. This coping forms a "perspective," a concept of several parts: (1) a definition of the situation, (2) "a specification of the kinds of *activities* one may properly and sensibly engage in" (p. 29), and (3) "standards of value against which people may be judged" (p. 30). "The chief feature of . . . [the students'] perspective is an emphasis on grades as the chief reward to be gained and on methods of meeting faculty demands so as to achieve desired grade levels" (p. 8). Students' preoccupation with grade point averages, apparently, makes their academic world go around. Two points, however, remain unclear. Does the concept of "perspective" refer both to conduct and to ways of looking at things (the definition of "perspective" and its use in the text is ambiguous)? And is the grade perspective a finding of the study or a principle guiding its design? I found no way to settle the second point because the writers argue on the basis of quoted examples (spontaneously offered, but unconvincing as the central theme because perspective as idea and perspective as conduct are not clearly distinguished).

It is hard to believe that Kansas students view the academic component of college life almost exclusively in terms of the magnitude of their grade point average (which is not to expect them to be unconcerned about grades). Is there no "gentleman's C"? Do men and women view grades the same way? Are there no differences between freshmen, sophomores, juniors, and seniors, no "sophomore slump"; no differences between students planning on graduate school and those not, between those doing well and those doing poorly? These questions were not considered systematically. The writers apparently fastened onto the fact that "grades are the chief institutionalized valuable of the college" (p. 55), a reasonable assumption about colleges, and did not ask at the outset what alternative perspectives students adopt about academic life in general and grades in particular.

Clearly an investigator can define the scope of a study; accordingly, Becker and his colleagues explicitly exclude campus organizations and personal relationships from consideration (pp. 2–3). But they contend that pressure from fraternities and anxiety about dating contribute to preoccupation with grades. There is some doubt, then, about the original definition of the problem. The book has a partially hidden theme, some of it explicit, some between the lines: an attempt by students and faculty, each with their own interests and subject to their own pressures, to strike some bargain over the nature of the academic enterprise. Students expect faculty to follow a tacit code of fair play, and become annoyed when faculty "violate" it by failing to specify what they expect (p. 111). Here, perhaps, is the core of the academic issue, the point where constraints on

students—from fraternities, from social life, from sources out of schoo (underemphasized)—and on faculty—from a variety of sources—all meet and where the preoccupation with grades (as well as other undisclose perspectives) originates.

Since the methods and formulation of this study were the same as thos used in the medical school, it is odd that the writers did not make compari sons. They state at one point: "Student academic performance is . . collective action and can be understood by being seen as such" (p. 134) If so, it is not collective in the sense that the medical students' action was that is, the undergraduates did not bind themselves in solidarity to dea with an almost unmanageable task—rather, they adopted a similar per spective. Their action was aggregate, not collective.

An interesting problem, it seems, got buried beneath the grade point average banality. Is there no variety in the academic side of life at Kansas? It seems unlikely.

Social Change and History: Aspects of the Western Theory of Development By Robert A. Nisbet. New York: Oxford University Press, 1969. Pp. x+ 335. $6.75.

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This book is a significant and opportune attack upon what the author believes is the most vulnerable feature of Western sociological theory, namely, the defective conceptualization of social change. The principal source of the problem, according to Nisbet, is the abuse of metaphor. Metaphor, to be sure, is a useful, even indispensable device by which the scientist is able to grasp complex ideas. But it is a dangerous device, if the scientist, in spite of routine theoretical claims to the contrary, mistakes his metaphoric analogy for an attribute of reality, arguing not from an analysis of the data but from personal, sudden enlightenment. Specifically, in the study of change, metaphoric reasoning generates confusion between the historical process itself and the philosophy of the historical process by attempting to apply nonconcrete, ahistorical intellectual images to concrete, finite situations, and empirical problems of change. The author is especially disturbed by many sociologists who, he says, seek the causes of change not in the (historical) situation but as somehow emerging *sui generis* from the determinants of some theoretical system. The problem is further compounded by the fact that many sociological theories are shot through with unsubstantiated and unwarranted assertions about the nature of society and social change; assertions which are rooted in the dubious theoretical speculations dating back to the conjectures of the ancient Greeks.

The major portion of the book is a succinct, often brilliant historical survey of the metamorphosis of these inadequate and often misleading philosophical concepts. Ironically, but significantly, most of the preeminent theorists of change down through the ages have been men very knowledgeable in both the theory and data of history. In fact, any number of them have made original contributions both to history and to the philosophy of

history. But deliberately so or not, these individuals have been interested primarily in the pursuit of what they believed was the inner truth and meaning of the concrete historical process, in contrast to the mere appearance of the historical record—a true reality which they judged could be made apparent only by and through the philosopher's effort to free the record of distracting evidence. Of particular importance is Nisbet's discussion of the present effort along these lines; specifically, the revival of neo-evolutionary theory used in conjunction with functionalism and the comparative method. Nisbet's view is that the present endeavor is useful in that it might help to direct the attention of the sociologists away from the piffle many of them have been involved with these past decades, but dangerous in that the venture might only be a subtle reworking of similar past efforts with similar deficiencies.

Although this kind of critical attack on one of the most sacred of the sacred cows of sociology will not be welcomed in many quarters, it is a necessary attack, not merely for its theoretical importance—which is the primary concern of the author—but also for its practical importance, especially for the study of non-Western societies. For example, many of the contemporary Marxist and non-Marxist proposals for directed social change in the so-called underdeveloped world are based upon the inadequate and misleading suppositions described in this book. That the actual programs of directed social change based upon these proposals, by and large, have been less than successful is a matter of record, and one of the crucial problems of our time. In the view of a number of observers, including the author and the reviewer, this is not mere coincidence. Nor is it mere coincidence to those in the field who have had the responsibility of translating the proposals into reality. Fieldworkers must not be confused with high-level planners, foreign advisors, and even visiting Western scholars, many of whom approach the field much as the philosophers of history approach the historical record; to wit, as individuals who do not want to be distracted by an alleged superficial appearance of reality. And if one may carry this argument one step further, it may also be worthwhile exploring whether many of the specific, Western-derived constructs in sociology may also be open to review, especially the possibility that many alleged universal attributes of behavior are, in fact, not universal, and hence are neither valid nor useful in studying or working in non-Western societies. In stating all this, as the author points out, one is not arguing for the creation of a non-Western metaphor, as unfortunately some dissatisfied non-Western sociologists, particularly certain Indians, now are. But it does suggest that non-Western field data must be more than sources of illustrations for already existing sociological theory which has been derived from an alien social heritage, and that when incongruities arise between Western theory and non-Western data, the fault may lie in the theory and not in the eye of the observer. It also suggests that if something goes wrong with a program of directed social change in a non-Western society, it may mean that there is something wrong with the advice and the theory behind the advice, and not that the problem must lie in unrewarding human relations which necessarily can and will be worked out in due course as the relentless march toward development and modernity grinds on.

All this said, an important nagging doubt remains about the central theme of the work. Even if the sociologist is historically inclined, he still

is a (historical) sociologist and not a (social) historian. Or, in other words, as a sociologist, although he may be interested in concrete historical problems in a concrete historical milieu, he may not be interested in the genealogy of the data, and primarily he is interested in generalizing from that data. Nisbet claims that this interest is both valid and useful and that it is this approach which distinguishes the work of, for example, Max Weber, whose method Nisbet approves, from that of many historical sociologists, whose method Nisbet condemns. The reviewer would like to concur, being an admirer of Weber's studies of the non-Western world. But in all candor, he wonders if Weber's contributions to non-Western sociology, as for example, the concept of patrimonialism, are less metaphoric than the typologies of, for example, Lewis Morgan. This caveat is presented with the full knowledge that the concept of patrimonialism should not be, and need not be, formulated in the manner that Nisbet condemns. Yet even if this stricture is observed, can patrimonialism be applied directly to explain a concrete process of change in, say, mid-nineteenth-century China? (The reviewer has been flayed for doing so.) And finally, even if it can, can it do so, while, for example, Morgan's stages of civilization cannot, because of a logical difference between the two kinds of concepts as the author suggests; or, because, in the case of Weber, the theorist attempted to confront the historical record in a non-Western society while in the case of Morgan, the theorist only wished to confront his Western-biased intellect? The reviewer does not wish to press any conclusion. He only wishes that the author had explored this important problem to a much greater extent than he does in the three pages he devotes to it.

But why fault a man for not writing someone else's book. In brief, the present study is a welcome and refreshing breeze of discontent in the very citadel of the sociological establishment, with implications that go far beyond the bounds of the history of ideas with which the author modestly circumscribes his work. For this reason, hopefully, the work will be taken seriously by contemporary sociological theorists. For then, perhaps, sociological theory might be more useful, and hence more respectable among those who hope to apply theory to the reality beyond the United States and Europe.

Democracy and Totalitarianism: A Theory of Political Regimes. By Raymond Aron. New York: Frederick A. Praeger, Inc., 1969. Pp. vii+262. $7.50.

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Numerous writers and scholars have testified to the intellectual credentials of Professor Raymond Aron, and I can only echo their testimony. Aron combines exacting scholarly standards with a highly original mind to study and interpret social structures and dynamics. If one does not always agree with Aron, there is no doubt that he can provoke a classic intellectual dialectical response.

It was, therefore, with great excitement that I anticipated this book. Un-

fortunately it does not measure up to Aron's previous standard. Part of the problem occurs because this work is part of a larger study of industrial societies (two other separate volumes), and Aron does not want to repeat what he has said in those volumes. Second, the nineteen essays which appear in this present book were originally given as lectures in 1957–58 to a student audience and have not been edited. Third, Aron's brief introduction to the essays, in which he indicates his main interest in using the French and Soviet systems to illustrate his ideas on political systems, succeeds as a retrospective account of events in France over the decade since he gave his lectures better than as an introduction to this book. One feels immediately that he is continuing a conversation with his original audience

In his first essay, he seems to waste too many words addressing what appears to be a French internal problem over the word *politique*. Only at the end of this essay is his statement of a framework for the book. Aron says he is interested in the "overall meaning of politics on the plane of causal relations and on the plane of essential features of collective life." He is not interested in the contest between multi-party regimes or one-party regimes, but rather in the kinds of social choices each regime permits and the consequences of these for the society.

What follows is somewhat of a maze which, while it has coherence, taxes hard the reader who has not read Aron's other work. He claims to be testing out the notion of early philosophers that the character of societies is related to the constitution of power. He is not in search of the "best" system or category of systems to deal with the problems of industrial societies and of humaneness. Different systems may do things equally well or poor, and each brings with it a different set of problems; depending on circumstances, one kind of political system may be more "coherent" with the rest of that society. For example, in a small, almost side discussion, he suggests that societies may be better off for the purpose of economic modernization with a one-party system, since multi-party systems have led to so many coup d'états.

The next essays are a series of what appear to be unfinished discussions on the nature and expression of political systems and the relative significance of politics to community life. Earlier he asserted the "primacy of politics" (pp. 9–11), and attempts to discuss it throughout the book. Unfortunately, he ends up making statements rather than providing empirical evidence or suggesting sociological approaches to the study of the old problem of "primacy" of any institution. Moreover, he says he does not mean primacy in terms of determination. Rather, he means that politics is as much shaped as it contributes to the shaping of the forces in society, and that this is especially true of industrial and modernizing societies.

He lists and discusses the characteristics of each of his two main categories, the multi-party system and the monopolistic-party system. His discussion of the sources of corruption of each—his concept of corruption is not as narrowly defined as in everyday usage—forces one to reexamine common notions about how systems fail to get diverted and/or transform themselves into other kinds of regimes.

His last two chapters summarize the sources of imperfçction of the multiparty and the monopolistic-party regimes, and try to list the historical belief systems upon which each type is based. It is fairly clear that, on bal-

ance, Aron concludes that the multi-party (constitutional-pluralistic) and the monopolistic-party (ideological) systems are both flawed, the former in practice, the latter, inherently, because of its ideological domination of the population. While the latter may strengthen economic development, it may fail to recognize its compromise of "democratic" principles which it proclaims. If it does, it may lose its legitimacy as a revolutionary system. A constitutional-pluralistic regime has difficulty making itself work because it has a tendency to oligarchy, or if too democratic, to anarchy, which may give rise to coup d'états or the strong-man rule.

There is no doubt that one can gain by reading this book, but his other works have been more rewarding. Aron originally titled this book *Sociology of Industrial Societies: A Sketch of a Theory of Political Regimes*. That is a more appropriate title, as he notes himself, than the one actually carried. While it is difficult to locate a proper theory in this book, one does find suggestive lines of study of political systems within a limited comparative range.

Environment and Policy: The Next Fifty Years and *Environment and Change: The Next Fifty Years*. Commissioned and edited by William R. Ewald, Jr., on behalf of the American Institute of Planners' Fiftieth Year Consultation. Bloomington: Indiana University Press, 1968. Pp. xiv+459; xvi+397. $4.95 each.

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These two hefty volumes are the product of a conference held in Washington, D.C., October 1–6, 1967. The format of the two volumes, however, is rather different. The papers of the volume of Environment and Policy, which all seem to have been given on the Thursday and Friday of the conference, were commissioned in conjunction with a "committee for correspondence" for each paper, with two to four especially commissioned independent critiques. According to Mr. Ewald's introduction, there were originally fourteen of these "policy-program resource papers," the fourteenth of which is supposed to be included in the other volume, but I am afraid I have not been able to deduce from internal evidence which one of the papers in the Environment and Change volume was so commissioned. Furthermore, there are fourteen papers printed in the Environment and Policy volume, so the problem of the missing fourteenth paper (see p. 4 of this volume) is all the more puzzling.

The papers in the Environment and Change volume were simply presented at the conference. The difference in procedure is reflected very sharply in the quality of the two volumes. The Policy volume, the papers of which received the special treatment, is very much superior to the Change volume. The editor has not made it easy to find out what actually happened. Maybe the volumes needed a planner in the editorial department.

The task of the reviewer of the content of a work of this kind is virtually impossible. There are twenty-seven authors in the volume on Environment and Change, and fourteen main authors and thirty commentators in the volume on Environment and Policy. Seventy-one people in all—most of them distinguished, most of them experts in their field, most of them with something to say. Some of the authors indeed are household words, at least in social science households—Gunnar Myrdal, R. Buckminster Fuller, Sir Geoffrey Vickers, Bertrand de Jouvenel, Robert M. Hutchins, Herbert A. Simon, and Bayard Rustin. In such a galaxy one looks not for the brightest stars but for the least expected, the quasars, as it were, of this universe. The young rebel, Carl Oglesby, for instance, writes a surprisingly delightful and perceptive piece on "The Young Rebels." John Burchard, in the middle of a delightful essay on "The Culture of Urban America," produces a quantitative evaluation of the quality of American cities, which I doubt will ever lead to an invitation from the chamber of commerce of some of them (Environment and Change, p. 209). I confess I was tempted to try I confess I was tempted to try a similar quantitative evaluation of the articles, but decided it was better to keep my friends.

One tentative conclusion I would draw from these volumes is that young people who have seen something of the world are apt to write much more sense than older, more distinguished people who tend, I find increasingly, to inhabit worlds of their own imagination. Thus, Ann Schrand and John F. C. Turner bring a remarkable breath of fresh air to the discussions of problems of development of the poor countries, which make the papers of Renato Severino and Buckminster Fuller look like rather pretentious nonsense. Another occasional burst of unexpected energy in this slightly bland diet comes from the occasional unreconstructed market-type economist, like Alan Altshuler, who, obviously in impish glee, proposes the dismantling of most of the institutions that all the planners take for granted, and an almost hilarious return to decentralization and the free market.

What the American Institute of Planners hoped for from this ambitious enterprise I hardly know. If they were looking for a rationale for their own profession, I am not at all sure that the enterprise was successful. Certainly no theory of the planning process emerges from these volumes, nor does a very coherent account of the role of the planning profession in the larger framework of society. Even the article which is supposed to deal with this, by Jack Meltzer (Environment and Policy, p. 241), while it does a competent job of statistical projection, does not throw very much light on what all these planners are really going to do, apart from giving a ritual blessing to processes which are going to take place anyhow. I confess I am disturbed also about the omissions. In over eight hundred pages, some of them in rather small print, there is virtually no mention of the international system or of the war industry and its impact on American and other societies, in spite of the fact that the rise in the war industry has been the major structural change in American society in the last thirty years. There is a mysterious design on the cover which seems to represent a man, woman, and child just being disintegrated by a nuclear explosion, but apart from this it is hard to find any reference to these problems. There is very little explicit reference either to the "knowledge industry," that burgeoning com-

plex of education, religious, entertainment, and communication institutions which again is creating perhaps the major structural change in world society today. Perhaps the best use of these volumes would be to put them on the shelf until the year 2017, and then have them reviewed again. The postaudit of the wisdom of this generation may then stand as a warning to the generation that will be writing books about 2067.

Selective Service and American Society. Edited by Roger W. Little. New York: Russell Sage Foundation, 1969. Pp. 220. $7.50 (cloth).

Selective Service and a Changing America. By Gary L. Wamsley. Columbus Ohio: Charles E. Merrill Publishing Co., 1969. Pp. 259. $2.95 (paper).

Samuel H. Hays

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The defense establishment of the United States has absorbed over half of the national income for nearly twenty years, and for a similar period has required the services of a high percentage of our qualified manpower. Yet these institutions which obviously have such a tremendous impact on the development of our society have been the object of few serious studies. One area that has been receiving increased attention during the past five years has been the draft and the selective service system. Although much of the published material has been marred by emotion, bias, and faulty assumptions, there are an increasing number of studies that have most, if not all, of the hallmarks of true scholarship.

Gary L. Wamsley of Vanderbilt University and Roger W. Little of the University of Illinois, Chicago Circle, have made significant contributions to the evaluation of the organization of selective service which are both objective and timely. Gary Wamsley's book, as its title indicates, is an attempt to evaluate the organizational environment and processes of selective service in the light of the concepts of political and behavioral science as well as organizational theory. He seeks to show why an American public opinion that was antimilitarist and devoted to the concept of the citizen soldier could accept selective service for so long and now appear to reverse its field. By describing the nature of the organization, its relationships with supporting institutions, veterans' organizations, National Guard, and the Congress, he develops a credible portrayal of an institutionalized organization, working in harmony with the long-established political and social concepts of our culture, entrenching its methods and ideologies in its support of traditional values and its interlocking political relationships. However, the accelerating processes of social change with rapidly increasing population growth and the resulting urbanization has been eroding the value systems upon which selective service was based, placing increasing emphasis on equality and uniformity while deemphasizing voluntarism and local control by neighborhood communities.

His description of the detailed working of local boards and their relationship to state and national offices, albeit based on a rather slim sample (one

state), provides an excellent perspective of both the strengths that many have seen in the system and the weaknesses that others have criticized. His presentation is highly objective and is limited only by the size of the sample and a tendency to consider short-range results and impacts as opposed to long-range influences on society.

Roger Little's book, on the other hand, is addressed to the larger issues of manpower procurement related to conscription, and as such is an extension of the work initiated by the University of Chicago Conference on the Draft, held in December 1966. Its work, published in *The Draft*, by Sol Tax (Chicago: University of Chicago Press, 1968), incorporated a wide variety of perspectives on military manpower procurement, alternative lines of action, and a prescription for future action. Like the Chicago papers, Dr. Little has brought together a group of essays which examine widely different aspects of the problem. In his own initial essay he provides an institutional analysis from a sociological perspective of the manpower procurement processes. To this he has added an account of the historical development of the selective service in the United States by Harry A. Marmion of the American Council of Education; a social profile of local draft board members in Wisconsin by James W. Davis Jr., and Kenneth M. Dolbeare of the University of Wisconsin; a discussion of juvenile delinquency as related to military service by Merril Roff of the University of Minnesota; an examination of the effect of the draft on the Negro by Charles C. Moskos, Jr., of Northwestern University; a study of the occupational mobility resulting from military service by Major Irving G. Katenbrink Jr., of the Regular Army, together with a portion of Gary Wamsley's study.

Although not closely related to each other or bearing directly on all of his conclusions, each of the studies in the book contains a wealth of facts and statistics which provide valuable insights into various aspects of the issues involved in providing and utilizing manpower in the armed services. As such they provide an important addition to the published literature in the field. Assuming that the services will require large numbers of men for the foreseeable future but that not all available will be required to serve, Dr. Little suggests that there should be a redefinition of the initial term of eligibility for service, a necessity for unifying and integrating the programs and agencies involved in voluntary recruitment with those of conscription, and finally, a requirement for a coordinated military manpower policy covering reserves and volunteers as well as draftees. He feels that a commonly accepted definition of what constitutes fulfillment of the military obligation is a basic element of any such policy. His conclusions carry much logic, are supported by substantial evidence, and merit careful consideration by those directly concerned with the formulation of military manpower policy.

As in most studies on subjects which arouse great emotion and controversy, both books contain assumptions and make certain unsupported statements with which the purist might quarrel. Wamsley's contention that there was very little coercion in producing military manpower for colonial wars or revolution is one. Little's assumption that there are many assignments in the military for those with a limited background of social, educa-

tional, or mental skills is another. However, such occasional lapses do not detract from the overall value of both books, which should be included in any course of study or research program covering the recruitment of military manpower in America today.

Television and Politics: Its Uses and Influence. By Jay G. Blumler and Denis McQuail. Chicago: University of Chicago Press, 1969. Pp. xxvii+379 $13.25.

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University of Denver

Jay G. Blumler and Denis McQuail have produced a book that is based mainly upon a number of meticulously implemented panel surveys with small local samples of voters (748 in all) in 1959 and again in 1964 in the Pudsey and West Leeds constituencies of England. Major focus was placed on tracing changes of voting intentions among respondents who were exposed to political party broadcasts during Britain's national election campaigns in 1964. The authors have made extensive use of the more or less standard American survey methodological paraphernalia, such as semantic differential scales, factorial analyses, and multiple regression analyses among others. The shortcomings of *Television and Politics* are not reflected in the application of inappropriate research techniques; but rather, they are mirrored in the clichéd and weak conceptualization that characterizes this work as a whole.

Unlike the usual ten-week all-out free-for-all hoedown that characterizes an American presidential race, British national election campaigns are telescoped neatly into a tidy seventeen-day period. The television aspects of British campaigning—in contrast to the American situation—are rigidly limited and controlled in terms of costs, volume of materials that are broadcast, and available air time. Major British political parties get free air time for campaigning at prime evening hours. Air time is allocated for political parties to broadcast their own persuasive fare on a proportional basis that is congruent with the seats a given party holds in the House of Commons. In the 1964 campaign the three major parties—Conservative, Labor, and Liberal—were afforded a total of thirteen separate television telecasts and eighteen separate radio broadcasts. Political Party Broadcasts (P.P.B.s) are telecast simultaneously so that a viewer tuning in to television during the "political campaigns" time slot can view nothing else but a P.P.B. Yet, despite this near-captive quality of British political party telecasting, the authors report that roughly only a fourth of the voting public in all of the British Isles tuned in a given P.P.B. during the 1964 campaign.

Compare all this with the electronic media aspects of the 1968 election campaign in the United States, where a total of $58,900,000 was spent by political parties for the purchase of air time alone. In that year a total of no less than 5,000,000 political spot announcement airings bombarded Ameri-

can voters. The Federal Communications Commission has estimated that during the '68 campaign the *average* American television station carried fifty-one paid network spot announcements, 522 non-network spots, and ten hours and fifteen minutes of network political programming, as well as six hours of non-network political programming.

Given the rather thin level of exposure to an unimpressive volume of British political party television propaganda in 1964, one wonders whether it was really worth the effort to launch the type of substantial study upon which this book relies. Still, the authors pressed on—in their words—"to find out why people watch or avoid party broadcasts; what uses they wish to make of them; and what their preferences are between alternative ways of presenting politicians on television" (pp. 10-11).

Unfortunately, the naïve framing of a terribly complicated mix of problems results in a book that is replete with social science clichés, tautological "findings," and annoying caveats that leave the American sociological reader in an uneasy state. It might be quite appropriate to adapt a functionalist "use-gratification" paradigm to study certain influences of the mass media provided that the model takes into account the personal and social consequences that stem from both use and gratification. In *Television and Politics*, however, Blumler and McQuail fail to deal with the consequence variable. Instead, we are informed in all seriousness that total exposure to political broadcasts increases as total television set ownership increases; that "only a minority seek help in deciding how to vote . . . because most citizens have already made up their minds before campaigning starts, and they stick to their early decisions right up to Polling Day" (p. 81); that "some electors [i.e., voters] look to the mass media for guidance when deciding how to vote, while others seek a reinforcement of their political opinions and allegiances" (p. 124); "that the degree of exposure to the television campaign of 1964 varied directly according to the strength of a viewer's motivation for following it" (p. 142); and that there is "a tendency for the opinion leaders to endorse reinforcement seeking and 'ammunition seeking' ('to use as ammunition in arguments with others') motives for receiving broadcast propaganda more often than did the majority of the respondents" (p. 151).

With the exception of some tenuous data indicating that the Liberal party may have gained some votes in 1964 as a result of its televised political broadcasts, *Television and Politics* shows no solid evidence that exposure to political broadcasts alone makes important changes in the political behaviors of most voters. But countless American "use-gratification" studies—studies that are cited by the authors—time and time again have already provided ample reliable evidence to this point.

What sociologists and political scientists must begin to do is to focus on the broad long-range societal impacts that political television may be generating on the body politic as a whole—rather than upon the attitudes of small numbers of individual voters. The authors make casual note of this important consideration in their concluding chapter, "there is a legitimate area of speculation about the indirect impact of television—about, that is, those effects which stem not from its influence on political attitudes but

from the subsidiary consequences for certain political processes of increasi public reliance on television" (pp. 261–62). This observation comes mu too late in the book however, and it is passed off as being merely a flee ing afterthought. Pity.

Berufe im Wandel—ein Beitrag zum Problem der Professionalisierung. B Hans Albrecht Hesse. Stuttgart: Ferdinand Enke Verlag, 1968. Pp. viii 163. DM. 32 (paper).

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This book addresses itself to the explication of the concepts of "Profe sionalisierung" and "Verberuflichung" and to a description of the relat processes of occupational change. The study was stimulated by the questic of whether it is useful to apply the (Anglo-Saxon) approach of "profe sionalization" to the German occupational structure.

In the first part of the book the concept of "professionalization," th ideology behind the research of the professions, and an outline of stages i this research are discussed. The second part on "Professionalisierung i Deutschland" starts with an analysis of the meaning of the word "profe sion" in general German usage as well as in that of the social sciences; i the main it is devoted to a description of the two processes mentioned abov

Diverging from T. Parsons and E. C. Hughes, the author defines "Pro fessionalisierung" as every process that results in a new occupation (p. 9 or, more precisely, as a self-determined formation or change of an occupa tion (p. 150). This autonomy of the occupational process characterizes th crafts in Germany. Crafts come into existence or change by the craft asso ciation initiating and controlling the process, by the Handwerkswissen schaftliche Institute at the universities designing the regulations, especiall those on entry, and by the federal government approving and sanctionin the regulations. The author emphasizes the predominantly political orien tation of this process: the aims of the craft association are accommodate with the state's economic policy, while there is almost no scientific occupa tional research. The process of "Verberuflichung," in contrast, bringin about and changing the skilled (and certain semiskilled) industrial occupa tions is, in its formal aspects, quite similar to the aforementioned proces but it differs with regard to the aims and the controlling agents: association paralleling those of the crafts do not exist and, consequently, group polic and group control of the process are lacking. The dominating aims of th agents of change are, in this case, the rationalization of industrial work an the training of the appropriate labor force. As the author puts it, "Verbe ruflichung" pertains only to the economy, "Professionalisierung" to th economy and to the society (pp. 144–48).

The merit of this book resides in the description of the processes of th formation of skilled occupations in West Germany. Descriptions of this kind have been lacking so far. What must be criticized is the proposed con ceptualization: In the discussion of the two processes (especially p. 151),

the emphasis is on control, almost to the neglect of an analysis of its conditions, especially of the penetration of the occupational world by the natural and the social sciences. But technical competence is precisely a central element in the concept of "professionalization." The neglect of this element is due to the fact that the author focuses exclusively on skilled occupations in Germany. The question of the applicability of the "professionalization" approach to the analysis of the German occupational structure is, therefore, still an open one; it has to be answered by considering the processes of change in other occupational strata too.

Game Theory in the Behavioral Sciences. Edited by I. R. Buchler and H. G. Nutini. Pittsburgh: University of Pittsburgh Press, 1969. Pp. xiii+268. $8.95.

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Government funding agencies, together with the academic reward system, do not seem to admit the possibility of useful conferences which end on their last day. And so we are confronted with volumes, such as this one, which solemnize miscellaneous thoughts, opinions, and the beginnings of analyses which naturally occur when a field—in this case, anthropology—is first trying on some new ideas from other fields—in this case, mainly graph, game, programming, and decision theories. Such papers are appropriate to a conference and to self-destroying dittoed materials, but they generally do not warrant widespread and archival distribution without careful refereeing, which is not often done. The conference that gave rise to this volume was held at McGill University in 1966; it had a similar title which, you will note, describes the mathematical ideas much too narrowly and the substance much too broadly.

The book has three parts: part 1, on "Applications" (presumably of game theory), has six chapters; part 2, on "Experimental Games" (which is the only real justification for not restricting the title to anthropology), has two, and part 3, on "Applications of Related Approaches," has four. The last two chapters of part 1, B. Lieberman's "Combining Individual Preferences into a Social Choice" and R. Kozelka's "A Bayesian Approach to Jamaican Fishing," actually belong in part 3. All of the "applications" chapters are better described as analyses that have been influenced by decision-theoretic thinking—by such notions as strategies, payoffs, interlocking control, coalition formation—since virtually no result of any mathematical theory is really applied to anything. In the few cases where it looks as though an application is immanent, one is frustrated that the final calculations are not made (e.g., the linear programming analyses suggested by H. Hoffman, chap. 9, and in a curiously disjointed and unclear article by I. R. Buchler and R. M. McKinlay, chap. 10).

For me the best articles are T. C. Schelling, as always lucid and clever, exploring possible insights game theory may provide into ethical systems; the informal strategic reanalysis by R. F. Salisbury of the social role played

by the 22-level shell currency of Rossel Island; A. Rapoport and A. M. Chammah's careful experimental study of repeated play of the game "chicken" and the comparison of these results with their earlier ones on the "prisoner's dilemma"; and the very neat analysis by J. Atkins and L. Curtis of the conditions that must be met for a wedding to occur in the Tenejapa culture.

Aside from Rapoport and Schelling, none of the authors is (and none professes to be) an expert in the mathematical theories being discussed, and so it is not surprising that some misleading statements have crept in. Examples: "But once we know the goals, knowledge of the strategies is already in hand and game theory has nothing to offer us" (p. 66). "We must remember also that in game theory, the goals of the contestants must be the same, or must be such that the gain for one can be expressed as the negative of the gain for another" (p. 68). The description of linear programming on page 198 suggests that the direction of the inequalities is independent of whether the objective function is to be minimized or maximized.

It is vexing that, in a 1969 volume for nonexperts, the latest reference in M. Shubik's partially annotated bibliography on game theory and related matters is 1962 (an apparent 1964 exception, a W. Edwards paper, was actually published in 1954).

Smoking, Health, and Behavior. Edited by Edgar F. Borgatta and Robert R. Evans. Chicago: Aldine Publishing Co., 1968. Pp. xii+288. $10.75.

Robert B. Smith

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This book is an excellent critical review of current research and public policy on the relationship between smoking and health. It is comprised of twenty-one chapters which are based in large part on papers and reports presented at the 1967 National Research Conference on Smoking and Health, held at the University of Wisconsin, Madison. It presents a comprehensive and well-integrated introduction to the health consequences of smoking, to theory and research on the social and psychological causes of cigarette smoking, and to the political and social policy implications of the smoking and health problem. *Smoking, Health, and Behavior* is required reading for those interested in current research on cigarette smoking, and in the relationship between smoking and health.

Part 1 presents five chapters on smoking and health. The first, "Some Notes on the History of Tobacco Use," by Edgar Borgatta, briefly traces the history of the use of tobacco for chewing and smoking. Daniel Horn's, "Some Factors in Smoking and Its Cessation," describes several accounting schemes that have been used in recent research on smoking and its cessation. Joan Guilford's, "Smoking and Health—Revisited," reviews and evaluates some of the evidence for smoking and disease linkages. She concludes (p. 38): "Cigarette smoking is positively associated with lung cancer and that the greater the amount of cigarettes smoked, the greater is the probability of dying from almost all causes." David R. Hardy, a lawyer

from the Phillip Morris Company, presents the tobacco industry's views in his chapter, "Smoking and Health: The Importance of Objectivity." He states that the case against cigarettes has not been scientifically proved. This view is rebutted by the overwhelming evidence presented in the fifth chapter, "The Health Consequences of Smoking," prepared by the National Clearinghouse for Smoking and Health, Daniel Horn, director.

Part 2 (chaps. 6–12) presents seven chapters that review critically past research on social and psychological aspects of smoking. First, Bernard Mausner describes the 1965 Beaver College Conference on Behavioral Aspects of Smoking. Next, Salvatore Zagona reviews the 1966 National Research Conference on Smoking Behavior which was held at the University of Arizona. Howard Levanthal's "Experimental Studies of Anti-smoking Communications," is an excellent methodological critique that is of general interest to experimental social psychologists and sociologists, as well as to propaganda analysts and social engineers. Daniel Rosenblatt and Harvey Allen's chapter, "Use of Group Therapy in Smoking Cessation," documents their lack of success in recruiting college students to group therapy sessions concerned with smoking cessation. In "Needed Research on Smoking: Lessons from the Newton Study," Eva Sabler, Howard Freeman, and Theodor Abelin review and follow up their findings about smoking in high school. They advocate contextual analysis of smoking behavior. In "British Research into Smoking Behavior," Aubrey C. McKennell briefly summarizes British research on smoking and health, presents his own research on smoking behavior and attitudes of British adults and adolescents, and then presents a very interesting critique of antismoking communications. In chapter 12, "A Modified Model of Smoking Behavior," Silvan Thompkins revises his seminal theoretical scheme in light of the empirical research of Bernard Mausner and Aubrey C. McKennell.

Part 3 (chaps. 13–16) reports current research on social and psychological aspects of smoking. Richard Grant and Morris Weitman's chapter, "Cigarette Smoking and School Children: A Longitudinal Study," describes an attempt to reduce the frequency of cigarette smoking by educational programs in elementary and high schools. Borgatta and Evan's "Social and Psychological Concomitants of Smoking Behavior and its Change among Freshman" reports an interesting analysis of the relationships between various personal characteristics and smoking behavior. Of the various correlates, they found that "adult" behaviors such as drinking beer, liquor, and coffee are most strongly associated with smoking. Their next chapter, "A Smoking Dissuasion Experiment among University Freshman," is an instructive report of a well-designed experiment that did not work. Finally, Jerome Schwartz and Mildred Dubitzky point out some requisites for smoking behavior change in their chapter 16, "Requisites for Success in Smoking Withdrawal." They conclude that the prediction of smoking behavior change is very complex. Demographic, environmental, health, and personality characteristics are all associated with successful smoking withdrawal.

Part 4 (chaps. 17–21) traces the implications of the smoking-health problem for society. In "Smoking and Health: A Legislator's View," Senator Frank E. Moss, a sponsor of legislation regulating cigarette advertising, states that the attack on smoking rests in educating the youth not to smoke. In the next chapter, "Congressional Action on Smoking and Health,"

William Meserve, a staff counsel for the United States Senate Committee on Commerce, describes legislation regulating warning labels and advertising. In his very interesting short chapter, "Socioeconomic Effects on Increasing State Cigarette Taxes," H. R. Herron, of the Wisconsin Department of Taxation, traces the dysfunctional consequences of increased state cigarette taxes. High taxes on cigarettes encourage bootlegging, increase the costs of collecting taxes, lead many citizens to violate laws, but do not decrease rates of cigarette manufacture. In "Cigarette Advertising and the Mass Media," Percy Tannenbaum points out that not much is known about the effectiveness of cigarette advertising. He believes, as I do, that many children are attracted to cigarette smoking because it is defined as an adult act.

In the final chapter, Sol Levine aptly summarizes the book, extracting implications for future research. I agree with his request for more research with a strong sociological emphasis, but would also like to see more research on the politics of the smoking-health controversy. Why is it that the consumption and use of cyclamates, which are only tenuously linked to cancer in humans, was immediately restricted upon disclosure of the evidence, while the manufacture and sale of cigarettes remains virtually unchecked?

Drugs and Society. By Bernard Barber. New York: Russell Sage Foundation, 1967. Pp. xi+212. $6.50.

Chad Gordon

Harvard University

"Curiouser and curiouser," said Alice as she tasted first one side and then the other of the Caterpillar's mushroom. Professor Barber's application of functional analysis to the interplay of physiological, psychological, and social aspects of pharmaceutical, narcotic, and psychedelic drugs produces much the same response, as he guides the reader on a rapid trip through a bizarre domain: the looking-glass world of U.S. drug practice and propaganda.

Barber's expressed objectives are to extend his earlier work in a functionalist sociology of science into a content area where rapid discovery, frenzied commercial exploitation, and massively increasing individual use have far outdistanced both private understanding and public policy, and to offer moderate suggestions for "constructive programs of social action and improvement" (p. x). *Drugs and Society* does contain much information on the major parameters of both therapeutic and pleasure-seeking drug use, although the sociologist may want more theory and analysis while the reform minded will look for more stringent diagnosis and prescription.

Consider these illustrations that Barber has outlined: First, the U.S drug industry receives about 25 percent of the total medical care dollar (about $4 billion out of some $20 billion in 1960 [pp. 118-19]), and FTC/SEC studies show that the largest drug manufacturing corporations lead all other major business sectors in terms of return on invested capital

(10–15 percent [p. 121]), even after spending a full quarter of their gross incomes on advertising and promotion (over $200 million in 1963, more than $1,000 for every physician in the country [p. 126]). Second, the pace of drug development has been greatly accelerated in recent years. Of the eight major present categories, only the narcotic drugs were known to antiquity, barbiturates and hormones were introduced around the turn of the century, sulfa drugs and vitamins came in between the World Wars, and the antibiotics, antihistamines, and psychoactive drugs were developed only in the last thirty years. Third, each year from 100 to 400 "new" trade-name drugs or recombinations of older forms hit the market (p. 40), but about 20 percent of all hospitalized patients fall prey to complicating adverse drug reactions, often associated with the unpredictable results of new drugs or multiple-drug treatments (pp. 83–84). Barber frames the problem neatly: "Confronted with diagnostic obscurity and therapeutic uncertainty, they [doctors] use whatever drugs seem to help them in meeting this uncertainty, and sometimes the presumably helpful drug turns out to be ineffective, or productive of harmful side effects, or too costly. Pressed by drug industry promotion, by their patients, and by their own needs for therapeutic action and effectiveness, doctors are indeed sometimes as 'pill happy' as their patients. If they prescribe the more costly trade named drugs instead of the generic-named equivalents it may be because they have a need for the warranty of quality control and liability protection that they feel is provided by trade-marks" (p. 129).

Finally, since the development of this country's prohibition and law-enforcement approach to narcotics usage (about 1925), an illegal market has been artificially created in which an amount of heroin that would cost $12,000 legitimately now sells for something over $3.5 million. Rough estimates of the total volume of this illegal market (by Edwin Schur) run in the several hundreds of millions of dollars annually, and it is clear that large portions of the nation's petty thefts, prostitution, and burglary are directed toward getting enough money to support habits that may cost $50 to $100 per day at the artificially inflated prices. All of this is without the slightest evidence that the law-enforcement approach has done anything substantial to reduce the size of the problem or to help users who want to stop (pp. 151–55). Professor Barber has delineated a very wide and complex area for analysis, and one in which social change is more rapid than the rushing of the Red Queen.

From a theoretical point of view, the strongest and most interesting section of the book is the last chapter, "Definition and Functions of Drugs," which might well be read first to provide more perspective for the earlier chapters on drug discovery and testing, communication about new developments, the roles of various professional specialists, and social problems associated with use of various drugs. Barber's functional perspective can be seen in his very formulation of the comprehensive scope of the book ("It seems that always and everywhere drugs have been involved in just about every psychological and social function there is, just as they are involved in just about every physiological function" [p. 2]). Yet the idea of determinate consequences for one or more of these system levels is also imbedded in Barber's elliptical definition of a drug: "At all three levels, a drug is something to be defined not in terms of its substance, but rather in terms

of its functions for the system at that level and for the interaction of the functions of the different systems" (p. 166). In later pages, this is taken to mean any chemical substance having any of the following consequences, intended or unintended: (1) felt increase in aesthetic experience or skill (e.g., the mescaline in peyote for dancing strength, marijuana for increased appreciation of music, or LSD for the blending of sense perceptions); (2) aphrodisiac effects to yield control over love and sex (hemp in India); (3) ego-disruption, or the kind of "high" that makes one feel lifted out of his rut (alcohol universally, mescaline, psilocybin from mushrooms, LSD, and many other alkaloids often called hallucinogens, psychotomimetics, or psychedelic drugs); (4) ideological functions (as when peyote is used by Indians in the native American church to signify rejection of the whites' culture); (5) political functions (as when the Japanese in the 1930s sent great quantities of opium into the provinces of China that they had captured); (6) psychological support functions (tranquilizers and energizers to combat personality stress); (7) religious functions (peyote in the native American church, "ganja" or Jamaican marijuana as it is thought to bring the user closer to the divine); (8) research functions (as when controlled doses of substances producing reversible effects in persons or animals are used as aids in observing the workings of the organism); (9) social control functions (such as use of tranquilizers in the back wards of mental hospitals); (10) therapeutic functions in curing illness or reducing pain, whether in the form of folk medicines, home remedies or physicians' prescriptions; and (11) war and other conflict functions (as with curare, the poison gases of World War I, tear gas, biological weapons, or any form of less politically motivated poisoning).

Barber then takes up a number of problems flowing from the general functional approach, especially those concerning multiplicity of functions that may be asserted for a single substance, differential dosages producing different effects, negative outcomes or "dysfunctions," indirect effects, long-run results that may differ substantially from those in the short run, and the old question of intended and unintended consequences, all pointing up the great difficulty of basing practical courses of action on a theoretically possible "functional calculus." Interestingly, dependency is one of the very few "dysfunctions" of drugs discussed in any detail. This chapter is provocative and much richer in empirical content than are most such discussions, but cannot escape the inherent ambiguities and problems of the functional approach.

Much more analytic, and to some degree prescriptive than the early ones, is chapter 5, "Some Social Problems Connected with the Use of Drugs." Substantial attention is given to the "avoidable unavailability" of drugs due to lack of information, poverty, inflated prices of brand-name drugs, and doctors' unhelpful prescribing practices. The general conclusion (although expressed in the voices of other investigators, as Barber tries extraordinarily hard to be neutral) is that the "ethical" drug industry is operated through an artificial, administered market without serious price competition, where exceedingly high prices are maintained through voluminous advertising of brand names, and where the only real competition is through development of new products that may render last year's recombinations of elements largely obsolete.

Use of drugs for pleasure seeking receives somewhat more attention, and

Barber is clear in pointing out that the U.S. "addiction problem" is largely a consequence of our moral horror and prohibition-enforcement stance toward the issue of drugs that promise joy or at least temporary respite. While the discussion of these drugs and the possible resulting dependency as sociopsychological-medical problems rather than police matters is sensible and germane, sociological readers will wonder about the conspicuous lack of consideration of the especially relevant body of symbolic interactionist work on the typification, definition, or "labeling" approach to deviance in general and drug users in particular. A very interesting contrast can be seen in the approaches taken by authors in the collection *Deviance: The Interactionist Perspective*, edited by Earl Rubington and Martin S. Weinberg, in which the works of Becker, Cicourel, Erikson, Garfinkel, Goffman, Kitsuse, Lemert, Matza, Scheff, and Schur, among others, are used to analyze the cultural and social worlds of legitimated definers and the objects of their typification and labeling.

In addition to occasionally thin treatments of particular topics, very comprehensive and otherwise useful monographs, such as *Drugs and Society*, usually suffer from two additional problems: important omissions and a systematically selective perspective derived from the organizing conceptual framework. On the omission side in the present case, there is little attention paid to the social functions of three of the most widely used drugs: alcohol, tobacco, and marijuana. The effects on demographic structure and productive capacity of the society resulting from such "medical miracles" as the Salk vaccine's almost total elimination of polio is not mentioned, and there is no discussion of possible role changes and other outcomes derived by women through use of the Pill. As for selective perspective, we see that the functional framework (while not noticeably illuminating the long discussions of the social organization of drug manufacture and consumption any more than would have been the case with a solid use of exchange theory) sometimes produces the kind of statement that provides additional support to the old assertion that functionalism is in essence a conservative ideological position: "Peyote religion, seen from the point of view of the social scientist, is a relatively passive and therefore not unsatisfactory way of adjusting to the problems of meaning faced by American Indians" (p. 175). Now, apparently, it is Marx's turn to be stood on his head: "Opium is the religion of the masses."

Such occasional lapses should not obscure the fact that Bernard Barber in *Drugs and Society*, has placed a broad societal perspective on an extremely diverse set of social activities that directly concern life and death, state of health, fertility, pain, anxiety, dependency, and possibly joy. More of us should have his vision.

Israeli Society By S. N. Eisenstadt. New York: Basic Books, 1968. Pp. ix+451 $10.95.

Moshe Schwartz

University of Chicago

This is the first general sociological account of Israeli society. It fills, therefore, an important gap in the information about a country which in certain respects may be considered as a natural sociological experiment.

Professor Eisenstadt is undoubtedly one of the most perceptive and knowledgeable observers of the Israeli scene, as well as a major sociological theorist. Hence, this book could be expected to be a definitive treatment of its subject. Although excellent in many ways, the book falls short of this expectation. Too much emphasis is placed on value orientations, images, ideologies, and too little on the interplay of social origins, groups, organizations, social strata, classes, etc. In other words "cultural" variables tend to be used with much higher frequency than "sociological" ones. This may be so because in the Israeli context, ideological documents such as partisan periodicals or political statutes are more readily available than any others—especially those concerning the prestate period. Therefore the differential ability of different kinds of historical materials creates a built-in bias in favor of cultural ideological approaches.

Eisenstadt is well aware of this problem, at least in the instance of stratification: "most of the available data [on stratification] is limited to clear ideological expressions. . . . However, these images were purely ideological and bore few connexions to existing society" (p. 147). "Ideological orientations" is the most extensively quoted sociological concept appearing in the index. At the very beginning of the book (p. 6), the author seems to prejudge slightly the problem when he writes: "Two major considerations will prevail. One will be an attempt to understand how the *initial pioneering ideology* influenced the development of *any given institutional sphere*, while the second major point will be the transformation that took place with the establishment of the state and the encounter with the new immigrants" (italics added). It is always legitimate and often useful to ask one-sided questions—still, the name of the book is *Israeli Society* not "Ideology and Society in Israel." The choice of the first consideration tends to overstate the role of ideology, at least in the prestate period.

The clearest and best-integrated chapter is the one on the economic structure—probably because of the high quality of the research materials available from both the Falk Institute and the Bank of Israel. We may consider this chapter as a sample of what Eisenstadt could have done in other chapters with good data. A point which could have been emphasized more is the economic impact, both direct and indirect, of the security burden, even in 1963 when "most of the work on this book was finished" (p. ix)

Besides the already mentioned problem of the data, the chapter on stratification suffers from the vagueness of the concept "absorption of immigrants." After how long is an immigrant absorbed? Or a group? Are the criteria of absorption economic, social, cultural, or all of these? Can a person or a group stay indefinitely without being "absorbed"? Does absorption mean concentration of an ethnic group in one stratum of the society or does "institutional despersion" have to occur? Even this chapter, perhaps the most problematic of the whole book, is very interesting, especially in the last part, which deals with emerging patterns of stratification and social organization. Unfortunately, the summary is totally abstract and written exclusively in terms of "pattern variables."

The chapter on politics is excellent—at once concise and complete. Unlike the other chapters, it was even carefully updated; is mainly organized around issues and issue areas; but deals also with political structure. Here

Eisenstadt the political sociologist does not allow his data to be diluted by grand theory abstraction. To illustrate the difference between the two chapters, let us take the four words "ascriptive," "achievement," "particularistic," "universalistic," and count the number of times any of them appears on the last page of each chapter: They appear four times on the last page of the chapter on politics and twenty-four (sic!) times on the last page of the chapter on stratification.

The concluding pages contain some very interesting intersocietal comparisons and are remarkably eloquent. But they, too, overstress cultural and ideological variables. More important, two problems are not dealt with in the conclusion (nor, for that matter, systematically in the rest of the book), namely, the problem of war and peace and the problem of the relation between Israel and the Diaspora. In a narrow sense, these two problems may be considered external. Still, their impact on the fabric of Israeli society hardly seems negligible. We have already mentioned the economic impact of the security problem; the Diaspora also has had some economic impact on Israeli society. The very permanence of the external threat may have contributed to such things as the relatively mild degree of interethnic tension, and even perhaps ideological conservatism and slow changes in the political leadership.

Eisenstadt has not succeeded in providing us with a theoretical model of Israeli society; but then no attempt at studying a total society has succeeded in doing this. Still, this author's attempt is among the best. It should be read not only by those who are interested in Israeli society but also by students of modernization and by those who are interested in the study of total societies.

The Making of a Counter Culture: Reflections on the Technocratic Society and Its Youthful Opposition. By Theodore Roszak. Garden City, N.Y.: Doubleday & Co., 1969. Pp. xiv+303. $7.95.

Jerome Kirk

University of California at Irvine

Professor Roszak has expanded his brilliant twenty-three-page *Nation* article of last spring by the addition of three chapters and a theme. It is now a brilliant book, but the article was better.

He begins with an overview of what he calls the "counter culture": hippies, New Leftists, runaway preteens, professional rock musicians, and the rest of it. With proper scholarly caution about reifying *Zeitgeisten*, he nevertheless argues that "the interests of our college-age and adolescent young in the psychology of alienation, oriental mysticism, psychedelic drugs, and communitarian experiments comprise a cultural constellation that radically diverges from values and assumptions that have been in the mainstream of our society at least since the Scientific Revolution of the seventeenth century" (p. xii). This phenomenon, in the aggregate, exposes the crisis of contemporary consciousness.

At times, his appreciation of youth phenomena seems to be from rather an avuncular distance: he is put off by the technology of rock music, finding much of it "too brutally loud and/or too electrically gimmicked up" (p. 291), and he feels that the underground press has a "narrow obsession with psychedelic problems and paraphernalia" (p. 162). Nevertheless, he provides what is probably the best available concise and accurate description of his "counter culture."

His exegeses of the ideas of Herbert Marcuse, Norman O. Brown, Tim Leary, Allen Ginsberg, Alan Watts, Paul Goodman (and also Martin Buber, Daniel Cohn-Bendit, Sigmund Freud, Hugh Hefner, R. D. Laing, and others) are less true to their subject matter. One difficulty with these exercises is that Roszak is sloppy about it. The book contains an unnecessarily large number of errors in detail—names, like Ed "Saunders" and "Eselen" Institute, are misspelled, quotations are misattributed, and he even claims, "the society is getting younger—to the extent that in America . . . a bit more than 50 per cent of the population is under twenty-five years of age" (p. 27). (The fact is, of course, that only since 1919 has the median age been *above* 25.)

Worse, in a heavy-handed way he tries to show that all his seminal thinkers are converging on his own pet idea—that the "technocracy" is a phenomenon of intellectual history, and the real villain is the Enlightenment concept of "objectivity."

One is tempted to infer that Roszak was once bitten by a sociologist. Though he makes no distinction between natural and social science, he reserves his venom for the latter. He rejects both Karl Marx and C. Wright Mills, in part because they were preoccupied with extrapsychic and environmental influences on the individual. All "technocrats"—the manager who employs experts in his decision making, the theoretical physicist and the anthropologist—seem to value "objectivity."

Roszak's classification of ideas seems perverse even from the point of view of intellectual history. At one pole, he confounds mysticism with romanticism. At the opposite extreme, the bureaucrat who uses a spurious expertise to place his decisions beyond dispute consorts with the likes of Linus Pauling, who builds models for the thrill of it.

I fully agree with Roszak that our culture has a bad and dangerous habit of phrasing moral and policy questions in such a way as to beg the moral and policy issues, and points to the technical solutions of such irrelevant problems as justification for inhuman and shortsighted action. "Behaviorist" social science must of course share part of the blame. I think Roszak is correct, also, in seeing much of the great moral refusal as a disinclination to submit to the discipline necessary to understand what the "objective" scientists are saying.

Yet Roszak is not content simply to report the feelings of his youth, for he is an intellectual and a scholar: "One does not unearth the wisdom of the ages by shuffling about a few exotic phrases" (p. 145). And he is prepared "to take a very strong line on the matter and maintain that there are minds too small and too young for such psychic adventures. . . . There is nothing whatever in common between a man of Huxley's experience and intellectual discipline sampling mescaline and a fifteen-year-old tripper whiffing airplane glue until his mind turns to oatmeal" (p. 159). Somehow,

the particular intellectual disciplines he has undergone are necessary. Their methods are not arbitrary, their conventions not bizarre. It is perfectly reasonable to expect people to learn to read in order to enjoy novels, but it is a preposterous imposition to expect them to learn mathematics. Consequently, "the research of experts . . . cannot be democratized as a form of vital experience" (p. 264).

One inevitably concludes that technical language is indeed strange to this author, who characterizes science as "the expanding application of a fixed method of knowing to ever more areas of experience" (p. 214), and feels that scientists "cultivate a state of consciousness cleansed of all subjective distortion, all personal involvement" (p. 208), in order "to know without an investment of the person on the act on knowing" (p. 218). Perhaps Roszak does not even *know* any scientists.

Except for his implication that some kind of romantic-idealist scholarship of the nineteenth century reflects immediate experience as a whole, he does not propose an alternative method of communicating about important things. It might seem that the styles of Norman O. Brown and Timothy Leary would meet his criterion of subjectivity, but he writes off the first as one "that speaks by allusion and indirection, suggestion and paradox, and which could mean, at too many points, everything or nothing" (p. 115), and the latter as "impenetrably occult narcissism" (p. 64). Almost, he achieves a personalistic, radically egalitarian antiintellectualism, in which we are all one in the sight of God: "in dealing with the reality our nonintellective powers grasp, *there are no experts*" (p. 236). But then his romantic side ejects the mystical: "the poet's experience is defined precisely by the fact that the poet does *not* go beyond it. He begins and ends with it" (pp 253–54). Somehow, we must forget that the poet abstracts something from the experience which he can write down, in order to classify him with the mystic who eats the ineffable whole.

Disagreeing with this author is difficult, of course, since my "objectivity" will not permit me to rule out his spiritual and aesthetic preferences. Yet, he will not grant me mine; if I claim to find joy, or spiritual value, in doing science, I must not know *true* joy or spirituality. I am not considered even to like science *some* of the time except as an expression of my authoritarianism: "It is my own conviction that those who open themselves . . . are not apt to finish by placing a particularly high value on scientific or technical [sic] progress. . . . They will realize that the objective mode of consciousness, useful as it is on occasion, cuts them off from too much that is valuable" (p. 235).

In fact, "it would be a ludicrous mistake to contend that the things and forces with which science fills time and space—electrons and galaxies, gravitational fields and natural selection, DNA and viruses—are the cultural equivalents of centaurs and Valhallas and angelic beings. What science deals in is not so poor in ordinary sensory verification—nor so rich in imaginative possibilities" (p. 212). Indeed? Galaxies? Natural selection? DNA? Poor in imaginative possibilities? Come, now. Why, then, does the jargon of ecology and neurology play the same role in your counterculture as does that of astrology and yoga?

Ultimately, I find Roszak's point offensive, for he, not science, seems to be trying to shrink my consciousness by defining it away.

Yet, he is no nineteenth-century mossback, trying to reopen the Enlightenment. He is, in many ways, plugged in to our students. Sociologists should read this important book. Furthermore, they should make the intellectual effort to take it seriously, for it contains a genuine measure of truth. To what extent, in a particular context, are we inflating our achievements by implying that what we cannot measure has no importance? To what extent is a given research effort simply a tool of an utterly inhuman and uncontrollable social order?

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AJS

American Journal of Sociology

Volume 75 Bimonthly July 1969–May 1970

UNIVERSITY OF CHICAGO PRESS

CHICAGO, ILLINOIS

Published July, September, November 1969
January, March, May 1970
COMPOSED AND PRINTED BY THE UNIVERSITY OF CHICAGO PRESS
CHICAGO, ILLINOIS, U.S.A.

ACKNOWLEDGMENTS

Despite the enormous increase in books published, journals remain the major source of early dissemination of the results of scholarship and research. For that reason, the editors are indebted to the many colleagues across the country and abroad who assist us in the assessment of manuscripts. Even for the five out of six manuscripts that are not accepted for publication, the work of our readers cannot be overestimated. It is a continuous service to the profession.

Sociology has become so diverse a field that we cannot possibly confine our requests to those on our Editorial and Advisory Boards. We are aware of networks of people working in particular areas and tend to rely on those people for papers in those areas. However, we know that we are overlooking people whose assistance we would value, especially those with specialized expertise. We would like to hear from those people who can offer us that kind of particularized help.

Following is a list of the people who read at least one manuscript in the past year. We take this opportunity, at the end of volume 75, which marks our 75th anniversary, to thank those people.

Bert N. Adams
Joseph Adelson
Robert Alford
Heywood Alkers
Conrad Arensberg
Jeremy Azrael
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The Great Awakening: An Historical Analysis

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The Great Awakening (a period of intense religious revivalism between 1730 and 1745) is analyzed as a mechanism of social change. Even prior to the revival there were strains in American religion as well as politics toward greater individualism, voluntarism, and democracy. The latent function of the revival was to prepare the way for this new form of social order. As the structure began yielding to the increased pressures toward individualism, the revival served as a dynamic agent clearing away many of the ideological and institutional trappings that were blocking this transformation.

The period of religious revival falling between the years 1730 and 1745 in Puritan New England is one of extreme change in social organization. The task of this paper will be to analyze the Great Awakening as a mechanism of social change. In one sense, the revival was symptomatic of the extreme functional incompatibility between New England's dominant religious-political institutional order and its emergent differentiated economic and social substructure. The intensity and magnitude of the revival was indicative of strains inherent in an attempt to maintain a religious-political order which was basically incompatible with the material conditions of a colonial frontier environment. The latent function of the revival was to prepare the way for a moral and social order more in keeping with these material conditions by clearing away many of the ideological and institutional trappings that served to maintain the establishment of religion and its dominance of the polity and the economy. In so doing, the revival gave great impetus to a disposition toward individualism, voluntarism, and democracy already at work in and around New England.

The general line of the theoretical argument in this analysis will be as follows:

1 New England Puritan theocracy involved a medieval conception of authority and was "mechanical" in its solidarity.

2. Isolation and the extreme hardships involved in survival served initially to maintain the imposed conception of authority and system of solidarity.

3. The same challenge of adaptation coupled with a strong Calvinist work ethic tended to encourage heightened instrumental activity on the part of the colonists.

4. Through these activities New England developed an increasingly viable commercial economy that extended her involvement in the total colo-

nial economy, ended her isolation, and rendered her theocratic system of solidarity increasingly inapplicable.

5. A number of integrative problems developed which were symptomatic of rising dissension within New England.

6. Class antagonisms and regional hostilities increased and both contributed to and were symptomatic of rising conflict and strain within New England.

7. The Great Awakening was a socio-emotional reaction to the rising dissension and strain within New England.

8. Though manifestly the Great Awakening appeared reactive—a desperate attempt on the part of the traditionalists to reestablish the older theocratic moral order—its latent function was to destroy the old order, thus making it possible for a sectarian and denominational pattern more commensurate with democratic pluralism to emerge.

The theoretical model for the analysis is provided by Bales (1962, pp. 127–28) when he states:

> Looking at large scale systems in a very abstract way, one can form an idea of two "chains of events" or "series of strains" starting from opposite poles and proceeding in opposite directions, tending to cancel each other out, and each in its terminal effects tending to set off the opposite chain of events. One chain of events has its starting point in the necessities of adaptation to the outer situation and proceeds in its series of strains through changes in the division of labor, changes in the distribution of property, authority, and status and has its malintegrative terminal effects in the disturbance of the existing state of solidarity. The other chain of events has its starting point in the necessities of integration or reintegration of the social system itself and proceeds in its series of strains through a reactive . . . emphasis on solidarity which exerts a dissolving, undermining, equalizing, or curbing effect on the differential distribution of status, on differences in authority, differences in the division of labor with an ultimate terminal effect that may be maladaptive.

Bales's discussion seems to have great relevance in considering the events leading up to the Great Awakening. The explosiveness of the revival originated in the tension between the adaptive strains of a frontier situation and a traditional moral order imposed on such a situation. Bales's model has found wide application in the general action theory of Parsons and, as such, has had its greatest use in the functional analysis of institutional subsystems of society and the problems of social integration rather than social change (see Parsons 1951; Parsons and Shils 1951; Parsons et al. 1955; Parsons and Smelser 1956). However, the relevance of this model for the analysis of change in social systems has also been demonstrated in much of the work of Parsons and Bales (see Parsons, Shils, and Bales 1953; Parsons 1960).[1] Of specific relevance to this model as it is applied in this analysis is Boskoff's attempt to systematically apply a structural-functional per-

[1] Though space does not permit an extensive review of this aspect of Parsons' work, nor is it particularly appropriate at this point, the influence of this body of theory on the present work must be acknowledged.

spective to the study of social change (Boskoff 1964, esp. pp. 218–25). David Lockwood's distinction between "social" or "normative" integration and "system" integration helps to clarify some of the latent institutional and structural effects of the Awakening (Lockwood 1964, pp. 250–53). Though much of this analysis focuses on the lack of normative integration resulting from confusion in the core norms and values of the dominant religious institution, the problem of normative integration is analyzed as dependent on a more general problem of system integration, that is, the degree of articulation between the normative patterns dictated by the religious institution and the material conditions and emergent structural arrangements dictated by the harsh realities of life in a colonial environment. As Lockwood (1964, p. 251) points out, "there is nothing metaphysical about the general notion of social relationships being somehow implicit in a given set of material conditions. Material conditions most obviously include the technological means of control over the physical and social environment and the skills associated with these means. . . . Such material conditions must surely be included as a variable in any calculus of system integration, since it is clear that they may facilitate the development of 'deviant' social relationships which run counter to the dominant institution patterns of the system."

In order to get at some of these specific points, let us first examine some of the descriptive material pertaining to this period of history, the area, the movement, and the people involved in it. Then we will turn to an examination of the Great Awakening as a mechanism of social change.

THE HISTORICAL CONTEXT OF THE GREAT AWAKENING

Most historians date the beginning of the Great Awakening from the Northampton revival which began in the church of the great Puritan minister Jonathan Edwards in 1733, though actually it was a small ripple in comparison with the great wave that was to follow in 1740 with the ministry of George Whitefield.

Edwards was the grandson of Solomon Stoddard, himself a powerful minister who for sixty years had exercised a profound influence over his congregation in Northampton and the surrounding area. In 1727 Edwards left his post as a tutor at Yale and joined his grandfather in his church at Northampton. In 1729 Stoddard died, leaving the post to Edwards.

During the latter years of his life Stoddard had let things "slip" in Northampton, so the grandson reports (Ferm 1953, p. 165). He states: "Licentiousness for some years greatly prevailed among the youth of the town; they were many of them very much addicted to night walking, and frequenting the tavern, and lewd practices, wherein some by their example exceedingly corrupted others. It was their manner very frequently to get together in conventions of both sexes, for mirth and jollity, which they

called frolicks; and they would often spend the greater part of the night in them without any regard to order in the families they belonged to; and indeed family government did too much fail in the town."

By 1732, however, there was a marked change in the religious attitude of his people, especially the young people. Let us turn to Edwards' own report concerning *The Surprising Work of God in the Conversion of Many Hundred Souls in Northampton* (see Ferm 1953, p. 166): "But two or three years after Mr. Stoddard's death, there began to be a sensible amendment of these evils. The young people shewed more of a disposition to hearken to council, and by degrees left off their frolics; they grew observably more decent in their attendance on the public worship, and there were more who manifested a religious concern than there used to be." By 1733 Edwards noted a quickening in the concern of his people about religion (Ferm 1953, p. 168): "a great and ernest concern about the great things of religion, and the eternal world, became universal in all parts of the town, and among persons of all ages. The noise amongst the dry bones waxed louder and louder [until] all other talk but about spiritual and eternal things was soon thrown by." The concern for religion grew to such a pitch that "worldly" affairs were in danger of being ignored (Ferm 1953, p. 169). "The minds of the people were wonderfully taken off from the world, it was treated amongst us as a thing of very little consequence: They seem'd to follow their worldly Business, more as a part of their Duty, than from any Disposition they had to it; the Temptation now seemed to lie on that hand to neglect worldly affairs too much, and spend too much Time in the immediate Exercise of Religion."

Edwards continues to report the manner in which the revival spread to other communities not only in Massachusetts but in Connecticut. According to Edwards's report, there were great "stirrings" in at least twenty towns as the revival followed the Connecticut River as it wound its course to the ocean.

These "ripples" of revival in 1734–36 seemed to indicate a general disposition toward religious awakening in New England—a disposition which would be tapped to a much greater degree by the dynamic itinerant minister George Whitefield in 1740. It is in this second revival that we get an idea of the extent and intensity of this mass movement.

Whitefield's journey through New England began at Newport, Rhode Island, September 15, 1740. His twenty-four-day journey took him along a path up the coast from Newport to Boston and from Boston to York, Maine, and back again along the same route (Gaustad 1957, p. 27).

Some notion of his general impact on the people will be gathered by noting how the attendance grew in his two visits in Boston. The Boston *News Letter* (see Gaustad 1957, p. 26) reports of his first visit:

> Last Thursday Evening the Rev'd Mr. Whitefield arrived from Rhode Island, being met on the Road and conducted to Town by several Gentlemen. The next Day in the Forenoon he attended Prayers in the King's Chapel, and in the Afternoon he preach'd to a vast Congregation in the Rev'd Dr. Coleman's Meeting-House. The next Day he preach'd in the Forenoon at the South Church to a Crowded Audience, and in the Afternoon to about 5000 People on the Common: and Lord's Day in the afternoon having preach'd to a great Number of People at the Old Brick Church, the House not being large enough to hold those that crowded to hear him, when the Exercise was over, He went and preached in the Field, to at least 8000 Persons.

It is interesting to note that by the time he was concluding his second visit, the crowds had so grown that his farewell sermon is reported to have reached some 30,000 people (Gaustad 1957, p. 27).

Following his return to Boston, Whitefield turned westward until he finally arrived at Edwards's Northampton. After an emotional weekend with Edwards and his congregation, he began the third portion of his journey, following the Connecticut River and the path of the "frontier revival" to New Haven, where he preached five time in three days, greatly affecting not only the town people but the student body at Yale (Gaustad 1957, p. 28).

The revival itself cannot be characterized only as "sweetness and light," for there were many who were antagonized by this man and even more by the men who followed him (see Heimert and Miller 1967).[2] Indeed, the ultimate impact of the revival was the disintegration of the Calvinist religion and its domination of all aspects of the political, social, and religious life in New England (Heimert and Miller 1967, pp. xliii–lxi). Nor can the revival be characterized by Whitefield's ministry in these particular towns, for its impact spread over the entire New England area like a fire blown to great proportions not only by the other "itinerants" excited by the zeal of his ministry but by the local ministers inspired to greater evangelical concern by the impact of the revival.[3] One of the itinerants, Gilbert Tennent, was described by Timothy Cutler as "a monster! impudent and noisy," who could do nothing but tell all his hearers "that they were damned! damned! damned!" "This charmed them," Cutler notes, "and in the most dreadful winter I ever saw, people wallowed in snow, night and day, for the benefit of his beastly braying; and many ended their days under these fatigues" (Gaustad 1957, p. 33). James Davenport, the arch-fanatic of the Great Awakening, prided himself on his ability to tell on sight who were damned, loudly proclaiming his judgments in public (Tracy 1892, p.

[2] This edited volume (Heimert and Miller 1967) provides an excellent sample of sermons and other written documents of the Awakening and its aftermath. It is an excellent introduction to the positions and "rhetoric" of both those for and those against the Awakening.

[3] Unfortunately space does not permit us to become involved in the rich detail of the experience of each of these churches and communities. One may get a clear impression of the vast impact of Whitefield and the extent and intensity of the revival itself by turning to Joseph Tracy's volume on the subject (see Tracy 1892).

235). There were many other itinerants whose enthusiasm did not carry them to such excess: such men as Samuel Buell, Eleazar Wheelock, Daniel Rogers, Benjamin Pomeroy, John Owen, Timothy Allen, Jonathan Parsons, Nathanael Rogers, William Sturtleff, and, of course, Jonathan Edwards himself (Gaustad 1957; Heimert and Miller 1967). It was such men as these who determined the magnitude of the Awakening. The point that should be noted is that, in spite of the widespread primitivism manifested in the revival, it was not an anti-intellectual reaction, nor were its chief defenders particularly obscure people. As Edwards notes (see Ferm 1953, pp. 173–74), "the work in this town, and some others about us, has been extraordinary on account of the universality of it, affecting all sorts, sober and vicious, high and low, rich and poor, wise and unwise. It reached the most considerable families and persons, to all appearance, as much as others." (See Gaustad [1957, pp. 47–48] for further documentation of this assertion, especially as it pertains to the revival in the time of Whitefield.) Existing evidence seems to point to the Awakening as a mass reaction limited to no particular social stratum or group and not restricted to any particular geographical region. As Gaustad (1957, p. 52) observes: "The frontier was not now as in 1734–35 the stronghold of a movement which left the cities untouched. Nor did the coastal areas alone enjoy the showers from heaven, while the religious life of less accessible towns withered away. Whether the population was dense or sparse, the mode of living primitive or moderately luxurious, the class high or low, the economy agricultural or mercantile, the revival was there."

PURITAN SOCIAL ORGANIZATION

The revival had many characteristics of a mass movement and vast and complex social antecedents, concomitants, and consequences. In this section, more attention will be given to the Puritan formula for social organization, showing the more important characteristics of the dominant religious-political institutional order.

The common folk image of the Puritans as the epitome of the flourishing American "spirit" is an inaccurate caricature. Early Puritan theory was not in the least progressive. On the contrary, it was essentially an elaborate restatement of a medieval ideal. Perry Miller observes that the orthodox colonies were societies "of status and subordination, with the ranks of man arranged in a hierarchical series, the lower obedient to the higher, with gentlemen and scholars at the top to rule and direct" (Miller 1942, p. 84). Indeed, for many years such medieval practices as fixing just prices, preventing usury, and prescribing wearing apparel according to social status were perpetuated by the spiritual and governing elite (Miller 1939, p. 429).

Elsewhere, Miller (1956, 1961) has dealt brilliantly with the particular admixture of utopian and materialistic interest that brought the Puritans

to the New World. Neither had they been driven out of England nor had they left in flight from persecution. They had entered into an explicit covenant with God in the formation of a civil and ecclesiastical social body. Miller (1956, p. 5) asks: "What terms were agreed upon in this covenant? Winthrop could say precisely . . . a pure Biblical polity set forth in full detail in the New Testament . . . a political regime, possessing power, which would consider its main function to be the erecting, protecting, and preserving of this form of polity. This due form would have, at the very beginning of its list of responsibilities, the duty of suppressing heresy, of subduing or somehow getting rid of dissenters—of being, in short, deliberately, vigorously, and consistently intolerant."

Miller (1939) elaborates at great length concerning the implications of the covenant doctrine for the Puritan moral and social order. The Puritans were bound, first, to God through a Covenant of Grace which signifies the way God recognizes the salvation imparted to those foreordained to receive divine, saving grace. Second, they were bound together as a body of "visible saints" who, having grace, were knit together in the form of a congregation. Those so bound had great authority, not only in religious but in social affairs, to call and ordain ministers, to rule on the membership of the congregation, to discipline, admonish, and, if need be, excommunicate. Third, as Ahlstrom (1961, pp. 241–42) notes: "Beyond church affairs the covenant became normative as a means of ordering civil affairs. . . . What all this meant in a practical sense was that Puritans thought about economic, political, and social problems in extraordinarily corporate terms. The Church consequently directed its attention not only to the problems of the individual before God but to the state before God."

In principle, therefore, the design of Puritan social organization captures many of the essential components Durkheim saw in a "religious society." Recall his statement (Durkheim 1951, p. 159): "Now, a religious society cannot exist without a collective *credo* and the more extensive the *credo* the more unified and strong the society. For it does not unite men by an exchange and reciprocity of services, a temporal bond of union which permits and even presupposes differences, but which a religious society cannot form. It socializes men only by attaching them completely to an identical body of doctrine and socializes them in proportion as this body of doctrine is extensive and firm."

Though status according to the Puritan formula was ascribed and fairly well fixed at birth, the covenant doctrine also involved the implicit idea of contract. "Men should obey civil laws . . . not merely because the rules were right but because the men themselves had agreed to obey them" (Miller 1939, p. 429). The idea of contract as interpreted by the Divines had a very narrow meaning and shows in one sense an early recognition of the extreme vulnerability of a theocracy in a frontier situation. Contractu-

alism as applied in these early contexts was almost a "theoretical trap, a ruse for convincing men that they were engaged to support whatever learned ministers and magistrates could show was just, right, and honest" (Miller 1939, p. 429). It testifies to how unsure the theologians and magistrates were of the extent to which their utopian order could be maintained in terms of religious devotion alone. As Miller (1939, pp. 430–31) observes:

> the contractual idea presented priceless opportunities to inspire in men an energetic devotion to orthodoxy and to provide the state with a clear right to punish heresy and sin as well as crime and injustice. . . . They [the Divines] could hardly have realized the extent to which they were testifying that theology had lost its self-confidence, that even they, for all their religious devotion, were no longer ready to rest their case solely upon faith. They had to secure the aims of faith by providing that men had rationally consented to them in a covenant, and that magistrates and ministers were to expound them by logic. They believed they had thus shown the findings of reason to be one with the tenets of faith. They could not foresee, even in 1660, how short the time would be, once men had commenced thinking in this fashion, until the findings of reason would suffice of themselves, until the compact and the deductions of logic would provide the content of political wisdom, and the politicians would no longer be obliged to heed the requirements of faith.

Essential to the effective operation of "covenant theology" as a basis for social organization were several specific points of doctrine. Perhaps most important was the doctrinal emphasis upon the depravity of man, the sovereignty of God, and the ordering of the Church strictly in accordance with biblical prescriptions (Ahlstrom 1961, p. 239). Many of the searching questions always before the Calvinist, which Weber saw as the motivating force behind the Protestant ethic, hinged on these doctrines (Weber 1958). With the doctrines of the sovereignty of God and the depravity of man came the Puritan's perpetual anxiety concerning his state of grace. If such anxiety was not enough of a motivational spur to piety in an individual sense, these same doctrinal considerations instilled in the Calvinists an intense awareness of the total community and collective obligations. The sovereign God of the Calvinists was not removed from human and natural events. He was a living presence who had a considerable stake in the efforts of the colonists. After all, New England was to be the new capital of the Reformation. Any event—an attack of smallpox, a famine, an earthquake—was not merely an effect of natural law; it was an act of God initiated for intelligible reasons. "Afflictions do not just happen, but are sent from on high; public calamities are moral judgements upon a sinful people. . . . The moral status of people is therefore written out in events: if they are sinful, they suffer; if they are virtuous, they prosper" (Miller 1942, p. 41). Thus in these doctrines we find a basis for the extreme collective involvement of the Puritans and perhaps a basis for understanding why Puritan theology played into and helped maintain the mechanical social order. In a sense, every fast day or day of humiliation called in response to some collective calamity or event involved not only a period of intense self-scrutiny but an inventory of the collective conscience. As long as the harsh environmental realities

of frontier life coincided with the Calvinist's pervasive sense of depravity and sin, the pulpit could be used as an effective instrument of social control. As long as a collective identity could be maintained through a pervasive sense of mission, social solidarity within a fixed scheme of status could be obtained. As Miller states (1956, p. 6):

> A society dispatched upon an errand that is its own reward would want no other rewards; it could go forth to possess a land without ever becoming possessed by it; social gradations would remain eternally what God had originally appointed; there would be no internal contention among groups of interests, and though there would be hard work for everybody, prosperity would be bestowed not as a consequence of labor but as a sign of approval upon the mission itself. For once in the history of humanity . . . there would be a society so dedicated to a holy cause that success would prove innocent and triumph not raise up sinful pride or arrogant dissension.

But how long can any collective order maintain a condition of total mobilization? What happens to zeal when the wolf is no longer at the door? These are the next questions to which some attention must be given.

ADAPTATION AND THE ATROPHY OF PUBLIC MORALS

Noble designs, even if successfully incorporated, imply eventually a return to the ordinary. As Miller (1956, p. 14) states: "Many a man has done a brave deed, been hailed as a public hero, had honors and ticker tape heaped upon him—and then had to live, day after day, in the ordinary routine, eating breakfast and brushing his teeth, in what seems like protracted anticlimax. A couple may win their way to each other across insuperable obstacles, elope in a blaze of passion and glory—and then have to learn that life is a matter of buying groceries and getting the laundry done."

In a sense this clearly indicates the "glory" that awaited the Puritans in their theocratic "errand into the wilderness." The designs of the "errand" may have been, in Winthrop's terms, to "improve their lives to do more service to the Lord, to increase the body of Christ, and to preserve their posterity from the corruptions of this evil world"; but the exigencies of the situation contained other designs: the clearing of rocky pastures, the building of homes and communities, the providing of food, etc. Miller observes that hardly a generation had passed before the first sign of flagging zeal appeared among the people (Miller 1939, p. 471). John Cotton's disparaging comments on the younger generation in the 1640s was followed in the next three decades by a rising lament over "the waining of primitive zeal and the consequent atrophy of public morals" (Miller 1939, p. 471). These "jeremiads," or woeful exhortations concerning waning piety, grew to such a pitch by 1680 that the pulpits of New England churches rang with hardly anything else than these disclaimers (Miller 1939, p. 471).

What the divines did not realize was that the motivational spur they placed under the Puritans through their "jeremiads" was one of the primary

sources of the heightened instrumentality which ultimately worked against the form of social organization they sought to maintain: "the more the people worked in the right spirit, the more they transformed the society into something they never intended; the more diligently they labored on the frontier, in the field, in the counting-house or on the Banks of Newfoundland, the more surely they produced what according to the standards of the founders was a decay of religion and a corruption of morals" (Miller 1942, p. 92). Weber saw the effects of the same phenomenon when he noted the extent to which Calvinists in England were motivated by anxiety over their state of "grace" into heightened instrumentality. This instrumentality, accompanied by the extreme asceticism of the Calvinists, was to Weber the primary "push" behind the industrial revolution (Weber 1958). The effect of this self-abasement was similar in Calvinist New England. As Miller (1961, p. 337) suggests: "In Puritan New England we have a wonderful fusion of a political doctrine with the traditional rite of self abasement which, out of the colonial experience, had become not what it might seem on the surface, a failure of will, but a dynamo for generating action."

The analysis of these denunciations and woeful exhortations as they developed through the years provides a neat chronology of the economic growth of New England. What were called sins are "recognizable as manifestations of social change . . . [and] testify that, in the course of the century, by the very necessities of its predicament, the society became increasingly involved in the work of settlement . . . [and so] emerged by slow and insensible degrees into the now familiar outlines of a commercial and capitalist economy" (Miller 1942, p. 92).

Erikson (1966) similarly analyzes a number of concerted attempts to identify and denounce particular types of sins during this period as indicating heightened confusion and disorientation accompanying social change. The Antinomian controversy of 1636, the Quaker persecutions of the 1650s, and the witchcraft hysteria of 1692 were three more or less concerted attempts by the Puritans to "clarify their position in the world as a whole, to redefine the boundaries which set New England apart as a new experiment in living" (Erikson 1966). Similarly, the Great Awakening can be analyzed as another intense period of "boundary" redefinition arising from the increased functional incompatibility between the dominant religious institution and the emergent economic and social substructure of a commercial and capitalistic New England. What are some of the more important strains inherent in this incompatibility revealed in the "jeremiads" and periods of concern with deviance which Erikson analyzes?

THE STRAINS APPARENT IN THE JEREMIADS

One of the more immediate strains apparent in the "jeremiads" was the threat of increased diversity and individualism to the established religious

order. These dispositions were hardly compatible with orthodoxy. This seems to be the main question at issue in the Antinomian controversy Erikson discusses. "Ann Hutchinson . . . seemed to advocate a kind of religious enthusiasm which was simply not possible among an orthodox company of saints. . . . If saints are joined to God by a covenant of grace, she asked, why is it necessary for them to accept the discipline of an earthly church? If God bestows His grace directly on the recipient in a *private* moment of conversion, why should that gift be ratified by an official of the church who himself may not be chosen?" (Erikson 1966, p. 85 [emphasis mine]).

A strain toward individualism and diversity demands increasing religious freedom and toleration. This seems to have been the main issue in the Quaker persecutions. "The Quakers challenged the very notion of an orthodox community by pressing for religious toleration as a basic civil right" (Erikson 1966, p. 108). Though neither the Antinomian controversy nor the Quaker persecutions had a profound or immediate effect on the amount of religious freedom and toleration allowed in New England, both confrontations acknowledged the widening gulf between reality and theory and signified that men were conscious of the discrepancy while they were unable to cope with it.

With increased individualism and diversity, another integrative problem that became quite visible in the traditional order was the basis of assigning rank: "When the advance of husbandry and the increase of trade was dispersing the society and dividing the classes, husbandmen and traders were constantly encouraged by the code of Puritanism itself to do exactly those things that were spoiling the Puritan commonwealth. They worked in their callings, and they created multiplicity instead of unity; they waited upon God for the reward and they became social climbers instead of subordinates; they took advantage of their opportunities and they brought about laissez-faire instead of sumptuary regulation" (Miller 1942, p. 92). Preachers and magistrates became less influential, while merchants and businessmen increased their influence. Class lines that once were drawn on the basis of inherited status were now being redrawn on the basis of wealth.

It is difficult to evaluate the importance of the witch trials of the 1690s. It is perhaps no accident that these hysterical reactions corresponded fairly closely to the period of most intense and widespread denunciation of Puritan "dead-heartedness" by the priests and scholars. Both may signify the agonized profession of a society that knew it was doing wrong, but could do nothing about it. Both were, in a sense, "social purgations, enabling men to make a public expiation for [or projection of] sins they could not avoid committing, freeing their energies to continue working with the forces of change" (Miller 1949, p. 92). Sin, like the witch, was in the very

"fabric" of the society. By purging these impurities the Puritans could continue the business of colonization.

The fearful projections of the witch hunts were, in one sense, a prelude to the hysterical agonies of the Great Awakening. Both reactions were symptomatic of the increased psychological cost of attempts to integrate an old set of religious ideas with a new set of economic and social conditions. Both were symptomatic of increasing confusion and disorientation as the colonists were exposed to and entertained a bewildering array of new political ideas, economic alternatives, and ethical choices. It is in the dark that ghosts are seen. Similarly it is in the height of confusion and uncertainty about major political and social objectives that "the Devil [gave] up his more familiar disguises . . . [and] crouched in the very heart of the Puritan colony" (Erikson 1966, p. 158).[4] The significance of the Great Awakening in this context of confusion and disorientation is clearly illustrated by Heimert and Miller (1967, pp. xxiii–xxiv) when they state:

> When the revival erupted in 1740 it was almost everywhere greeted as the harbinger of the millennium, but the fervor of the welcome reflected decades of confusion and discontent within particular communities. Throughout the 1730's the church and religion had been struggling to preserve their social and intellectual primacy. . . . Congregations were racked by internal dissensions over ministerial qualifications or requirements of church membership, and communities were aroused by the manner in which the increasing wealth of the colonies was being divided. Whether or not they were directly involved in the pursuit of gain, or caught up in partisan animosity, nearly every American was confronted with a bewildering variety of personal options and ethical choices. Many questions were being asked, but few had been answered satisfactorily, not even in the minds of the clergy.

POLITICAL AND RELIGIOUS CONTEXT OF THE REVIVAL

According to Gaustad (1957, p. 15), "by the time the eighteenth century was under way, New England had become a mixed multitude religiously. The dominant religious group, Congregationalism, was losing its monopoly and its integrity as was the dominant theology, Calvinism." Not only were Anglicanism, rationalism, deism, and the "new philosophy" making inroads into high places in New England, but pietistic and evangelical sects such as the Quakers and Baptists were gathering many converts among the lower classes, who, being satisfied neither by the "dead preachings" of the established church nor by Newtonian demonstrations that the design of the universe proved the existence of God, longed for a more emotional religion of the "affections" (see Hofstadter 1962). Also, the new "secular" politics of such editors as Benjamin Franklin and an increasing number of

[4] Though space does not allow detailed commentary in the context of this paper, Philip Slater has made a number of interesting comments on the process of displacement as it ties in with the religious evolution of small groups (Slater 1966, pp. 1–23, 80–81). Though in quite a different analytical context, many of his statements about displacement in groups seem quite relevant to a clearer understanding of the Salem witchcraft phenomenon. See also Geertz (1964, p. 64) for an interesting discussion of "loss of orientation" as it relates to the development of new ideologies.

political and economic pamphleteers not only challenged the authority of the church and its ministers but threatened the intellectual primacy of religion in political affairs (Heimert and Miller 1967, pp. xxiii–xxiv).

The implications of these changes in religion and politics suggest strongly that New England was rapidly moving from a state of homogeneous Puritanism to heterogeneous "colonialism." Erikson (1966, p. 157) expresses these changes well when he states:

> the Puritan planters could look around them and count an impressive number of accomplishments. Here was no record of erratic providence; here was a record of solid human enterprise, and with this realization, as Daniel Boorstin [1953] suggests, the settlers moved from a "sense of mystery" to a "consciousness of mastery," from a helpless reliance on fate to a firm confidence in their own abilities. This shift helped clear the way for the appearance of the shrewd, practical, self-reliant Yankee as a figure in American history, but in the meantime it left the third generation of settlers with no clear definition of the status they held as the chosen children of God.

Erikson's latter point is critical in considering the social import of the Awakening. The decline of piety prior to the Awakening seems to indicate that the bonds that once united members in a highly integrated religious community were greatly diminished, even those within the church assuming the more individualistic, rationalistic, colonial character. When one considers the implications of such a development for members of a church that originally was, to such a great extent, authoritarian in matters of doctrine and polity, so highly integrated, almost "mechanical" in solidarity, it seems that Durkheim's notions concerning the psychological conditions of egoistic suicide are highly relevant at this point (see Durkheim 1951, p. 158). Slowly cut off from the integrative bonds of a highly solidary religious community by a broad cultural transformation, the psychological impact of increased freedom could only be disturbing to the Puritans. After all, it was hard enough to face the possibility of nonelection while in the midst of a highly integrated religious community. Though it was possible to reduce this anxiety to a degree in heightened instrumentality necessitated by survival in a hostile environment, the immediate and urgent problems of survival were only temporary. Increased success in adaptation occurred concomitantly with a reduction in the binding legitimacy of the theocratic moral order—religion was becoming increasingly an individualistic concern. When this outlet of heightened instrumentality diminished as the immediate challenges of survival were overcome, the less immediate integrative concerns and needs began manifesting themselves. Thus, psychologically, the Great Awakening seems to be a manifestation of the integrative needs of isolated and confused individuals who have turned their thoughts back to the dreadful God of their forefathers in a desperate search for new direction in life. Socially, the integrative strains observable in the Awakening are an indication of the failure of the old moral order to relate to the emergent structural patterns of individualistic, heterogeneous colonialism. The end result

of the revival is a marked social transformation signifying the beginning of the establishment of a new moral order based on a differentiated, functionally interdependent system of social solidarity. Niebuhr (1961, pp. 30–31) has said similarly: "It may be that American Protestantism with all the evidence of antinomianism that abounds in it, like the Democracy with which it is associated, represents not so much a movement from order to disorder as one from the order of authority to the order of freedom, or from the mode of life primarily interested in structure to one primarily directed toward action."

THE REVIVAL: AN AGENT OF SOCIAL TRANSFORMATION

How is it that the Great Awakening had, ultimately, an integrative effect in New England? After all, the revival broke the Congregational church wide open. Few churches were left totally unaffected by the heat of partisan controversy. Few people remained who did not have strong polarized attitudes concerning the psychological and social effects of the Awakening. As Gaustad (1957, p. 62) suggests:

> The anti-revivalists saw the Awakening as throwing New England into "Convulsion and Heat of Contention," as endorsing and encouraging persons who are "subversive of Peace, Discipline, and Government," as causing the churches to become "Dens of Disorder, Confusion, Noise and Clamour," and as sowing the seeds of "Discord, Intrusion, Confusion, Separation, Hatred, Variance, Emulations, Wrath, Strife, Seditions, Heresies, &c." The proponents of the revival, on the other hand, viewed this religious concern as a "Sweet Season" wherein "the Power, Grace & Love of God, are wonderfully displayed," as an occasion for "giving Glory to God . . . for his Grace . . ." and a means whereby "diverse thousands have been awakened."

To answer this question adequately some consideration must be given to the major institutional changes that came about as a result of this heated polarization and confrontation within the church.

One of the more immediate consequences of the revival was the seemingly unbounded seditious energies it released. "The most obvious of the pressures being resisted, as also one of the clearest consequences of the revival, was the challenge of the awakened to religious establishments" (Heimert and Miller 1967, p. xlvi). It is quite important to see not only the new directions to which these energies were pointing New England but also the kinds of changes that took place within the established church as it sought to strengthen itself to resist these pressures more effectively. Both the action and reaction are important in understanding how the Great Awakening facilitated the emergence of a new basis of solidarity.

As one reads the pronouncements of the leading proponents of the Awakening, such as Edwards and Tennent, and the arguments of the leading apologists of the establishment, such as Chauncey, it is clear that, at least on the surface, one of the main theological issues manifested in the Awakening was the place of emotion in the religious experience. Against Chauncey's

arguments[5] that the revivalists, more often than not, did great harm to the human constitution through the extreme emotional reactions involved in conversion experiences, Edwards[6] sought to delineate clearly the role of the "affections" in the religious experience (see Hofstadter 1962, pp. 55–81).

These debates have become quite important landmarks in the post-Awakening intellectual history of this country in that they show the extent to which Calvinists, whether proponents or opponents of the Awakening, were "casting off from the safe moorings of Puritan theology" and placing increased theological emphasis on the nature and will of man rather than the will of God (Heimert and Miller 1967, p. xlii). The revivalists, on the one hand, show the quickening of an evangelical disposition in the colonial mind. To Edwards, "man's happiness and his holiness were not achieved through study or by way of a mechanically progressive growth in wisdom, but from a heartfelt 'concent' to the 'divinity of divinity . . .' " (Heimert and Miller 1967, pp. xxxix–xl). By reacting to the "perversity of the passions" in the revival, its opponents, on the other hand, were to give new impetus to human reason as both a means of grace and the basis of human happiness. As Heimert and Miller (1967, p. xli) point out: "Such a rationalism, soon to be developed in the classrooms of Harvard and Yale as a general philosophy, was the distinguishing mark of the Liberal religion of eighteenth-century America. Over the next decades Liberals refined their scheme of salvation, in which 'time, exercise, observation, instruction,' and the improvement of one's 'capacities,' were the means of grace—and the only way, as well, for man to pursue his worldly happiness."

In addition to the theological and doctrinal revolution that the Awakening introduced, there were also new conceptions of the role of the church in society. One of the most conspicuous effects of the Awakening was the destruction of the traditional New England parish system (Gaustad 1957, p. 114). Separation of New Lights from established congregations led to a proliferation of new churches and conceptions of church organization. Out of the separating spirit of the revival "emerged the notion of voluntarism, the assumption that church affiliation was not an obligation to be forced on men but a privilege that must be freely exercised" (Heimert and Miller 1967, p. xlvii; see also Miller 1965, pp. 40–43). This new impulse toward voluntarism tended to undermine the very idea of an established church. "Members of the schismatic churches challenged the propriety of public taxation for ministerial support, violated the traditional rules of ordination and 'right hand of fellowship' association, protested against admitting the

[5] See Charles Chauncey, "Enthusiasm Described and Cautioned Against" (1742), and "Seasonable Thoughts on the State of Religion" (1743), in Heimert and Miller (1967, pp. 228–67, 291–305).

[6] See Jonathan Edwards, "The Distinguishing Marks of a Work of the Spirit" (1741), and "A Treatise concerning Religious Affections" (1746), in Heimert and Miller (1967, pp. 204–14, 516–40).

unconverted to communion, objected vigorously to cold formal, 'dead' preaching, and practiced a spontaneous, zealous personal religion" (Gaustad 1957, p. 114). With the greater salience of "voluntarism" and religious liberty within the schismatic churches came a new emphasis on the power and role of the laity in church affairs. The church itself was not so much a structured hierarchy dictating and governing the will of the people as it "served" the community as it was a means of spreading the gospel. In a practical sense this meant that as the church became more an evangelical force it became less a political structure. Indeed, the New Lights viewed the true church as "transcending denominational, as well as local allegiances, and sought, during the Awakening, to create what the itinerant Samuel Finley called a 'party of Christ,' in which were united the gracious of whatever persuasion" (Heimert and Miller 1967, p. xxxiv). Lay exhortation and "itinerancy" were common practices among the New Lights, as among the "New Side" Presbyterians of Pennsylvania and the Middle Colonies earlier (Hofstadter 1962, pp. 66–69). The significance of this growing emphasis on voluntarism and on the laity can be overdrawn, but it does suggest that the Awakening was a basis for the liberation of the will of the common man from the authority of an established religious-political order and the growth of a broadening national consciousness. It also shows the emergence of a denominational pattern of church organization more consonant with a pluralistic democratic political order.

This emergent pattern of denominationalism, religious freedom, and pluralism can be more clearly seen in the latter half of the eighteenth century, when doctrinal differences and specific denominational loyalties of those within the evangelical fold became more established. There was a healthy competition among congregations for new converts, but there was also heated contention concerning what sainthood compels a man to do. Edwards, as the most important spokesman for the Calvinist "New Lights," believed that "God had called on his American people to will a reorganized society into being. For Edwards, the ultimate test of sainthood was whether a man was so acting as to 'promote God's historical program' " (Heimert and Miller 1967, p. l). Man does not wait passively for God to establish His kingdom; man wills it through a progressive improvement of the human condition. The Separates, on the other hand, felt there was little else for man to do but wait for God "to punish the wicked by intervening in history with the terrors of the Last Judgment" (Heimert and Miller 1967, pp. l–li). Out of this controversy between the New Lights and the Baptist, Moravian, and Separate sects was to come eventually a new unity at least among these schismatic churches, with Edwards's conception of "experimental" religion becoming the dominant expression of post-Awakening evangelical Protestantism. In the latter years of the eighteenth century the spirit of "experimental" religion, if not its theology, was to be captured by Wesley

and Asbury in the Methodist frontier revivals (Clebsch 1968, pp. 183–85; Hofstadter 1962, pp. 95–104). Still later it was captured by the Finneys, Beechers, and Moodys as they sought not only to renew individuals but to kindle the national spirit in the waves of revivals that swept the frontier intermittently through the first half of the nineteenth century (Miller 1965, pp. 10–11).

The unity that was captured in "experimental" religion and revivalism was a quickening sense of national purpose and involvement. This was not the uniformity of an orthodox company of saints, or even the imposed stability of an established denomination, but a heightened sense that people, churches, colonies, though diverse and indeed at times in contention, were still members of a single society. Crude, uncultured, anti-intellectual though it was,[7] the "religion of the heart" forged a new kind of solidarity out of diversity. Heimert and Miller (1967, p. lix) capture this well when they point out:

> these evangelicals argued not so much with each other as for the attention of the American mind and, in so doing, actually attested to the death of the old notion of religious uniformity, and the birth of a new ideal of unity. . . . The conception of religious liberty was so taken for granted that it had hardly ever to be stated. Therefore, in this open field, the very competition among the denominations . . . becomes, to the analytical eye, not so much a manifestation of individuality, [as] . . . an almost unconscious, method of maintaining some perverse form of solidarity.

Thus, in the Great Awakening and the other awakenings that followed it, we see the gradual emergence of a heterogeneous nationalism characterized by individualism, voluntarism, and democracy. The particular character of American religion as well as politics found its shape in the agonies of the Awakening. As Jamison (1961, p. 194) states: "From the Awakening the principles of individualism and religious voluntarism became ever more solidly entrenched in the American scheme of things, and the transference of these principles to the political order was the inevitable concomitant. The democratization of religion went hand-in-hand with the extension of political responsibility to the masses of Americans."

SUMMARY AND CONCLUSIONS

This analysis has attempted to explicate the general theoretical notion that "one generally conceivable source of tension and possible change in a social system is that which arises from a lack of fit between its core institutional order and its material substructure" (Lockwood 1964, p. 252). A number of specific points related to this observation have been made in this paper.

First, the adaptive requirements of the colonial environment in New England, along with certain doctrinal points of Calvinist theology, facili-

[7] See Hofstadter (1962) for a thorough documentation of this thesis.

tated the development of a set of social patterns and relationships that constituted an increasing threat to the existing religious-political order.

Second, a number of specific structural strains, among them strains between orthodoxy and individualism, between authority and voluntarism, between uniformity and religious toleration and diversity, were revealed in the "jeremiads" of the priests and scholars of the religious establishment and show the manner in which the emergent social patterns of the frontier situation threatened the imposed institutional order.

Third, the very use of the "jeremiads" (and the increased frequency of their use) testifies not only to the nature of the "strains" in the system but also to the diminished success of the spiritual and governing elite in maintaining the religious institutional order in the face of these new structural patterns.

Fourth, the fearful projections of the witch trials and the hysterical reactions of the Great Awakening indicate strongly that diminishing structural integration eventually contributed to extreme confusion and disorientation in the normative system of the colonists. Both movements were in a sense socio-emotional reactions in the face of this increased confusion.

Fifth, the Great Awakening was a social movement of such magnitude and extensity as to disrupt the traditional religious institution, facilitating the emergence of a functionally differentiated religious order more compatible with a behavioral disposition toward individualism, voluntarism, and democracy and a new institutional dominance residing in the polity and the economy.

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Prophetic Failure and Chiliastic Identity: The Case of Jehovah's Witnesses[1]

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Since its inception almost a century ago, the Jehovah's Witne movement has been prophesying the impending disintegration of th established social order and its replacement by a millennial kingdo under theocratic rule. This paper presents a longitudinal analys of the impact of the group's millenarian orientation upon its de velopmental career. Attention is focused upon long-term modes o adjustment to recurrent prophetic failures, examining the ways i which the sect has adapted its collective identity to meet suc crises. In this perspective, the sect is seen as an informative case o the process of "self-fulfilling prophecy," operating as a source o both identity confirmation and identity change.

Chiliastic movements bid for sociological attention because of the rathe distinctive manner in which they express their alienation from the world justify their rejection of it, and propound their programs of social salva tion. Their belief systems represent a curious blend of escapist and quasi revolutionary orientations, well conveyed in their central convictions: tha the prevailing social order is doomed to more or less imminent destruction that it will be replaced by an ideal system from which all evil will be banished; and that this cataclysmic change will be effected, not by huma effort, but by some supernatural agency. Although the eschatologica doctrines developed by chiliastic groups vary greatly in their particulars they tend to induce characteristic social-psychological orientations which unite believers into solidary collectivities and often inspire them to engage in unconventional actions (Case 1918; Cohn 1957; Hobsbawm 1959; Kromminga 1945; Talmon 1965; Thrupp 1962). At the same time, the chiliastic mood and outlook also render such movements vulnerable to organizational crises. These are likely to be especially acute when specific prophecies have been publicly announced and have been phrased in a manner open to disconfirmation. Even in the absence of such specific prophetic failures, the prolonged sustenance of chiliastic fervor is likely to be problematic, and the typically foreshortened time perspectives of such movements may discourage or retard the development of organizational provisions for self-perpetuation.

How chiliastic movements adapt themselves to such exigencies has

[1] This paper is based, in part, upon documentary evidence presented more fully in the author's Ph.D. dissertation (Zygmunt 1967) and in a forthcoming book on the development of the Witness movement.

begun to be explored (Festinger, Riecken, and Schachter 1956; Hardyck and Braden 1962; Lofland 1966). Attention has been focused mainly upon short-term adjustments to specific prophetic failures, with relatively little inquiry into long-term modes of adaptation occasioned by recurrent prophetic failures or by extended delays in prophetic fulfillment. While the historical record does suggest that many such movements turn out to be short-lived because of their incapacity to meet the hazards to which they are peculiarly vulnerable, it also shows that some have managed to surmount them and, indeed, to "institutionalize" their millenarian outlooks.

The present paper deals with one such sectarian movement, Jehovah's Witnesses. During its career of almost a century, this group has assimilated a series of specific prophetic failures, sustained its millennial hopes through decades of "watchful waiting," and resisted secularization with considerable success (Czatt 1933; Salzman 1951; Sprague 1942; Stroup 1945; Zygmunt 1953, 1967). From a small cluster of adherents in Allegheny, Pennsylvania, it has expanded to about a third of a million members in the United States and over a million throughout the world (Watchtower Bible and Tract Society 1966*a*, pp. 36–43). This paper presents an analysis of the impact of the group's chiliastic commitments upon its career. Inquiry is focused upon the ways in which the sect has adapted its collective identity to sustain these commitments, especially in the face of recurrent prophetic failures and of prolonged delays in the coming of "Armageddon." In this focus, the group provides a striking illustration of the process of "self-fulfilling prophecy," operating at the symbolic-interactional level as an agency not only of collective identity confirmation, but also of collective identity change.[2]

EARLY BELIEF SYSTEM

The millenarian complex which gradually crystallized to form the symbolic core of the movement's belief system was a composite of orthodox and heterodox elements. Theologically, it was intended to reconcile the conflicting strains of Calvinist and Arminian thought which had come to characterize American Protestantism. Sociologically, it was a collective response to the unprecedented currents of change which were beginning to churn the mainstreams of American society in the 1870s.

The group's early ideology centered in the "Divine Plan of Salvation," the biblically derived key to man's history and destiny, believed to be

[2] The analytical perspective of the present study has been drawn from a variety of sources, especially the following: Blumer (1946); Festinger et al. (1956); Geertz (1965); Lofland (1966); Mead (1934); Merton (1957); Parsons (1951); Schutz (1955); Thomas (1929); Wilson (1959, 1961).

open to fuller understanding in these "last days."[3] The basic creed incorporated a fairly orthodox version of Adam's fall and the entrance of sin and evil into the world. Through willful disobedience of God, Adam forfeited his right to eternal life in Paradise, becoming subject to suffering and eventual death, a fate inherited by all his descendants. The course of humanity since then has been one of steady physical, mental, and moral deterioration. The burgeoning problems of the world were products of man's inherited sinful disposition, intensified by the machinations of Satan. God was not indifferent to man's plight, however. He was permitting worldly affairs to run their ruinous course to teach man the folly of his ways and his need for divine direction. In his loving concern for his creatures, God had, in fact, already set in motion a plan for freeing man from the thralldom of evil, suffering, and death. Its central provision resided in the redemptive role of his son, Christ Jesus. The perfect life and sacrificial death of this "second Adam" served to restore the balance of divine justice disturbed by the first Adam's transgression, providing a basis for reconciliation between God and man.

The work of human redemption, however, was not completed with Jesus' atoning sacrifice. The perfect life of Jesus paid the "ransom price" for humanity, restoring man's spiritual account to its condition before the Fall. Jesus, however, retained custody of this restored "life right" and its application to humanity. The completion of Christ's redemptive mission lay in the near future, and would be accomplished through his establishment of the Kingdom of God on earth after his second coming (Russell 1899, vol. 5).

The inauguration of the millennial Kingdom would pass through two phases, one destructive, the other reconstructive. The first phase, in which earthly institutions would be overturned, was expected to unfold at an accelerated pace in the immediate future. For several decades, the group believed that this worldwide disintegration of the social order would take the form of a bloody struggle between the "wealthy and laboring classes," resulting in pervasive terror and anarchy. While naturally mediated, this revolutionary process was under divine supervision. Members of the group were enjoined to leave this "Battle of Armageddon" to God and to refrain from any overt participation in it (Russell 1897, vol. 4).

An era of grand reconstruction was to begin thereafter. Under the regime of Christ, reforms would be instituted in all sectors of social life, inaugurating a series of just and benevolent arrangements beyond the dreams of the most extravagant utopians. Peace and plenty would prevail;

[3] For a detailed statement of the sect's early doctrine, see Russell (1886–1904). For additional primary sources, see Zygmunt (1967, pp. 949–54). Some useful secondary sources are: Gerstner (1963); Macmillan (1957); Pike (1954); Stroup (1945); Watchtower Bible and Tract Society (1959); Whalen (1962).

sickness, pain, and even death would go; love and righteousness would at last be triumphant. The survivers of Armageddon, as well as the gradually resurrected dead, would now be given the same opportunity for continued life in this paradise, Earth, as Adam had originally been given, under the condition of continued obedience to divine law (Russell 1891, vol. 3).

In the meantime, between Christ's first advent and the establishment of the Kingdom after his second coming, a superior life offer was being made to a chosen "little flock," restricted to 144,000. Unlike the rest of the earthly creation who were destined to be regenerated and given a second probation under ideal conditions, this select group of "saints" were presently on trial under very difficult conditions. They were destined, if faithful, to undergo "translation" from physical to spiritual form before the earthly Kingdom's establishment, thus achieving the immortality hitherto reserved for God and Jesus (Russell 1904, vol. 6).

The belief system thus propounded a dual doctrine of salvation. In one of its forms, salvation was governed by a modified principle of "election," reserved for a small number of Christians who had responded to God's "special call," had proved their sainthood by steadfastly following the example of Christ, and had thus established their eligibility for the superior prize of "divine nature." This form of salvation was, of course, preempted by the movement for its own members. For the bulk of mankind, on the other hand, salvation would take place on a purely earthly and physical plane, involving a radical change in external conditions of living and a perfection of human nature, but no transcendence of the creatural attributes of materiality and mortality. These two phases of salvation were related, however. The work of millennial reconstruction awaited the completion of the "gospel harvest," the major purpose of which was to complete the ranks of the little flock, who, after their translation, would assist Christ in inaugurating and ruling over the Kingdom.

EARLY COLLECTIVE IDENTITY[4]

The movement's collective identity and earthly mission were derived directly from this configuration of beliefs. The group came to conceive of itself as a divinely chosen spiritual elite, selected from the ranks of dedicated Christians to be advanced beneficiaries of God's Plan of Salvation and auxiliary instruments in its fuller execution. They were the "spirit-begotten sons of God," the "justified and sanctified New Creation," the prospective "Bride of Christ," marked for the ruling "Royal Priesthood." The movement regarded its own earthly career as ending with its spiritual

[4] The term "collective identity" is used here to refer to a collectivity's definition of itself as a distinctive group living within, and meaningfully related to, a symbolically construed existential framework. (For a more elaborate treatment of the concept, see Zygmunt 1967, pp. 32–50]. Cf. Durkheim [1947]; Geertz [1957, 1965]; Kluckhohn [1951].)

metamorphosis in the near future. In the meantime, it had a dual mission to prepare and perfect itself spiritually for its exalted future role and to act as God's agency for "harvesting" the little flock of saints (Russell 1904, vol. 6).

The manner in which the group proceeded to meet its first mission served to inject elements of pietism and asceticism into its orientation, expressed particularly in its cult of "character development" (Russell 1904, vol. 6). This emphasized the cultivation of the "fruits of the Spirit," prayer and spiritual contemplation, mastery of esoteric biblical knowledge, patient endurance of suffering, and the development of an inoffensive saintly disposition. In undertaking to fulfill its second mission, the movement developed into an actively evangelistic organization, but it rejected the orthodox view of evangelism as an endeavor to convert infidels or to rehabilitate moral derelicts. Evangelism was a temporally limited "call" to "gather out" a small number of already committed Christians to serve as spiritual rulers in the Kingdom. In its preaching, the sect "talked up" rather than "down" to its audiences, seeking not to save them from sin and damnation but rather calling upon those who were already living a Christian life to recognize their still higher role in the scheme of divine purpose. This concept of evangelism led the group to concentrate its early proselytism upon church-affiliated, white, adult Protestants (*Watchtower*, April 15, 1900).

The movement's chiliastic commitments also predisposed it to develop a decidedly negative image of the world and a pessimistic view of the possibilities of improving life conditions through purely human endeavor. The entire social order was irretrievably doomed to destruction in the forthcoming Battle of Armageddon, demonstrating unmistakably that man was incapable of ordering his life without divine guidance. Thus, the movement's general world view induced not only an "antiworldly" but also an antimeliorist stance.[6]

The early weltanschauung of the movement, however, is perhaps better described as "superworldly" than antiworldly. Despite the revolutionary imagery in which its message was cast, its ideological outlook, though transcendental, remained basically conservative. The saints were to play no direct part in Armageddon and, in fact, expected to be "snatched away" before its climax (Russell 1886, 1:340 ff.). They were at first enjoined to recognize earthly governments as the "Higher Powers ordained of God" and to cooperate with them in all matters that did not violate divine commands (Russell 1886, 1:249 ff.). The early social ethic of the group generated attitudes of pietistic aloofness and moral superiority rather than militancy, urging the New Creation to "overcome the world" by enduring its suf-

[6] For representative expressions of these views, see Russell (1886), vol. 1; (1889), vol. 2; (1897), vol. 4.

ferings and by practicing spiritual disciplines which perfected Christian character (Russell 1904, vol. 6).

TIME PERSPECTIVE

One feature of the movement's belief system which strongly influenced its development was the time perspective derived from its millenarian views. In attempting to round out its identity, the group formulated a body of historical doctrine, including a mythical self-history, which provided a comprehensive symbolic linkage with the past (Russell 1886, vol. 1; 1891, vol. 3). Such symbolic reconstructions of the past, like the group's constructions of the present, however, were designed to fortify the movement's expectations of things to come. In its basic contours, the group's collective identity was thus really anticipatory in character, anchored mainly in its image of the future.

The general nature of these collective anticipations has been outlined, but one of their important dimensions remains to be considered, namely, the more specific time constructions in terms of which the future was defined. "*When* will the great change come?" was bound to emerge as a pressing question, and the group's answers were to be a very consequential aspect of its orientation. Indeed, in its successive answers the sect begins to reveal some of its long-term patterns of adaptation.

Although the sect had come to espouse millenarian views virtually from its inception in the early 1870s, for several years it ventured no predictions as to when the Second Coming and associated events would occur (Russell 1874). Little more than an independent local congregation at this time, it was predominantly gnostic rather than conversionist in character (Wilson 1959). Crucial in transforming it into the launching ground for a translocal movement were some contacts between the group's founder, Charles Taze Russell, and certain Adventist preachers.[6] The latter, previously involved in the Millerite movement of the 1840s, were now trying to revive some of its prophecies in revised form, expecting Christ to return in the flesh in 1873–74. In an attempt to meet the prophetic failure that followed, some of them advanced the view that Christ had indeed come as predicted, but in the unexpected form of a spirit being. It was not until 1876, however, that Russell adopted their belief that the Second Coming had already occurred and that the gathering of the little flock preliminary to the final climax was already in progress. According to certain biblical calculations, this harvest was to extend only to 1878, at which time the gathered saints were to be translated into spirit form. It was the belated injection of chiliasm of this

[6] The early issues of the sect's journal, *Zion's Watch Tower and Herald of Christ's Presence*, contain accounts of some of these contacts (see especially the issues dated October–November 1881; April 1890; April 25, 1894; July 15, 1906).

short-term, date-focused variety that supplied the note of urgency required to launch a broader evangelistic enterprise. This strain of chiliasm, however, also predisposed the group to experience a succession of prophetic failures which were to disturb it periodically during the next fifty years.

The first of these failures in 1878 did not appreciably alter the short-term, date-focused orientation of the movement. A biblical basis for extending the harvest to another proximate date, 1881, was very shortly discovered, and the movement continued its preoccupation with evangelistic ventures, devoting relatively little attention to organizing its following (*Watchtower*, February 1881).

The second prophetic failure in 1881 precipitated a more serious crisis which required a longer period to assimilate. For several years, the group maintained its general posture of watchful waiting for the belated translation to occur. While its chronological doctrine did identify the year 1914 as marking the final end of the "time of trouble," at this point the group found it inconceivable that its earthly departure might be delayed that long (*Watchtower*, October–November 1881; October 1883).

The attitude of tense expectancy was gradually relaxed, and before long the sect began to recast its perspective upon the future. One of the first evidences of reorientation emerged in 1884, when the group applied for a formal charter of incorporation from the state of Pennsylvania. The harvest which had previously been defined as ending in 1881 was eventually redefined to extend to 1914 (*Watchtower*, October 1884). This shift from short-term to long-term chiliasm was to have important bearings upon the movement's subsequent development. Although the sect still conceived of itself as a temporary enterprise, its terminus was now thirty years away, beyond the life-span of many members. Heretofore operating on a short-run basis, the movement was now obliged to face the problems of self-perpetuation more squarely. At the same time, in expanding the boundaries of its own future, it provided itself with respite from the crises of prophetic failure.

It was during the next three decades that the movement underwent its first major cycle of institutionalization. The tasks of organization and control began to receive belated attention, resulting in the crystallization of a more formal structure. The sect's doctrinal, cultic, and ethical systems were elaborated and integrated. The identity design previously sketched became more firmly established.

While these institutional forms strengthened the movement's capacity to endure, its commitment to the date-focused form of chiliasm continued to be a source of instability. As 1914 approached, excitement over the prospective "change" mounted and preparations for it began to be made (*Watchtower*, December 1, 1912; November 15, 1913; January 1, 1914). Decades of preaching had by now committed the movement publicly to its

prophecies in a firm and extensive way. The third prophetic failure in 1914 accordingly proved to be a major crisis; yet the movement had by now developed the organizational resources needed to meet the new crisis with minimal disruption. Not only did it cling to its chiliastic hopes, it now regressed to its earlier short-term orientation (*Watchtower*, November 1, 1914). A revised set of prophecies were issued, focusing upon 1918 as the new terminus (*Watchtower*, September 1, 1916). After the fourth failure, another round of prophetic revision ensued, focusing upon 1925 (Rutherford 1920). With this fifth failure, the further issuance of dated prophecies was suspended, the movement's millenarian stance assuming a diffusely immanent form detached from any specific point in time (*Watchtower*, March 1, 1925).

The abandonment of date-centered chiliasm, which had prevailed in the movement for half a century and had occasioned its five major prophetic failures, was not the only feature of the group's long-term adaptation. Additional adjustments are discernible in the more specific ways in which the movement sought to meet its prophetic failures and the cumulative impact of these efforts upon its identity and mission.

RESPONSES TO PROPHETIC FAILURE

The fact that the group's early identity had come to be anchored in specific chiliastic commitments made prophetic fulfillment a vital identity-confirming need and prophetic failure a source of serious identity problems. Potentially, such failures precipitated crises of faith in the broader belief system on the basis of which the prophecies had been ventured. They also occasioned crises of mission, since the movement conceived of its evangelistic operations as temporally limited, its mandate for harvesting saints expiring when the specified prophetic dates were reached. Prophetic failures, furthermore, damaged the movement's public image as well as its self-conception as a divinely directed group.

The sect's responses to the prophetic failures conformed to the following general pattern:[7]

1 The initial reaction was usually a composite of disappointment, puzzlement, and chagrin. This describes the reactions of the leaders as well as of the rank and file.

2 As a secondary adjustment to its dejection and confusion, the group usually regressed for a time to its earlier orientation, maintaining an attitude of watchful waiting for its predictions to materialize. During this interval, the group was likely to adhere to the view that its prior evangelistic mission had been completed, that the harvest had indeed "closed" on the

[7]Data regarding the sect's adjustments to these prophetic failures were gleaned mainly from an intensive study of documentary sources, especially the group's principal journal, the *Watchtower*.

dates previously announced. Proselytism usually declined for a time b did not cease altogether, its continuation being justified as an "educ tional" rather than a "recruitment" operation. Such incipient redefinitions group mission were likely to be temporary, however. This was also the pha during which the doctrinal bases for the previously issued prophecies we reexamined and conjectures entertained as to why the events expect might have been "delayed."

3. Sooner or later, the group achieved a fuller resolution of its quandar The symbolic strategies through which this was accomplished were sul stantially the same in all five instances of prophetic failure. The grou first asserted the claim that its previously advanced prophecies had bee in fact, partially fulfilled, or that some event of prophetic significance ha actually transpired on the dates in question. The conviction that th Plan of God was, indeed, unfolding in the general way indicated by th belief system was thus sustained. The "events" selected to give substan to this claim were supernatural and hence not open to disconfirmatio Thus, in its effort to convert the prophetic failure of 1878 into a parti "success," the group asserted, retrospectively, that the year marked th point at which the "nominal Christian churches were cast off from God favor" (*Watchtower*, February 1881). The year 1881 was said to mark th time when "death became a blessing," in the sense that any saint wh happened to die would henceforth be instantaneously changed into spirit being at the moment of expiration (*Watchtower*, December 1881 The year 1914 allegedly signified the "end of the Time of the Gentiles, when God's benevolent disposition toward the Christian nations wa withdrawn (*Watchtower*, November 1, 1914). The year 1918 was retro spectively defined as the time when Christ "entered the temple for th purpose of judgment" (Rutherford 1920). A further elaboration of th prophetic significance of the latter year was issued on the eve of the pro phetic failure of 1925: the year 1918 marked the time when the heavenly portion of the Kingdom was established and when a "New Nation" was born (*Watchtower*, March 1, 1925). Each of the prophetic failures was thus redefined in retrospect in a manner which provided nonempirical con- firmation for the group's chiliastic outlook.

4. The supplementary strategy used to revitalize the group's millennial hopes was the projection of unfulfilled portions of prior prophecies into the future through the issuance of redated predictions. As indicated previously, this strategy was used in combination with the strategy of retrospective reinterpretation to meet the first four prophetic failures. A variant of it was used to meet the fifth—the issuance of undated prophecies covering still-unrealized expectations. In addition to renewing the group's chiliastic orientation, this supplementary strategy helped to resolve the crisis in group mission by extending the mandate to proselytize.

5. Beyond the two basic strategies outlined above, the movement employed a variety of other devices to sustain its chiliastic outlook. These have been used not only in conjunction with specific prophetic failures but also more generally to confirm the group's faith in its image of the future. The most frequently used device has been the selective interpretation of emerging historical events as confirming signs of the approaching end (see Russell 1886, vol. 1; Rutherford 1920). The group's negative and pessimistic world view sensitized it to perceive virtually every major and minor social disturbance and natural catastrophe as an indicator of the impending collapse of the earthly system. The varied forms of unrest, generated in a society undergoing rapid industrialization, urbanization, secularization, and other changes, were exploited to affirm the hopeless bankruptcy of the prevailing social system and its disastrous downward spiral. The expressions of vexation, alarm, and impending doom voiced by various outside commentators on the passing scene were similarly drawn upon as validating evidence. A related device has been the effort to interpret the experiences and achievements of the movement itself as confirming signs of the approaching climax and as validation of the sect's conception of itself as an agency of prophetic fulfillment (see Watchtower Bible and Tract Society 1959).

Although these several strategies proved to be very helpful in coping with prophetic failures, they also served to introduce some important changes in the movement's general orientation and sectarian style. In these changes are discernible some additional features of the movement's long-term adaptation to the hazards and dilemmas of being a chiliastic group.

IDENTITY CHANGES

In pursuing the strategy of claiming that some supernatural event of prophetic significance had transpired on the dates previously announced, the group was, in effect, recasting its definition of the present in terms of its symbolic model of the unfolding historical process, thus preparing the context for changes in its own identity. The retrospective claim that 1878 marked the time when "nominal Christian churches were cast off from God's favor," for example, had the effect of stiffening the sect's posture toward other religious organizations. While the movement had from the outset been critical of many features of orthodox theology, its early attitude toward fellow Protestants had been rather benign. As noted previously, Protestant churchgoers were regarded as the most promising candidates for membership in the spiritual elite which was to rule the world. Withdrawal from established churches, though implicitly favored, was at this time not explicitly demanded. After 1878, however, the move-

ment rapidly took on the characteristics of a "come-outer" group, even offering its converts specially prepared "withdrawal letters" to be sent to their former congregations, explaining their reasons for quitting "Babylon."

The claim that the year 1881 marked the time when "death became a blessing" for the saints served to reconcile the idea of translation with the possibility of individual death. Many early believers held the view that the living faithful would never experience a physical death but would be collectively changed into spirit beings "in the twinkling of an eye." The occurrence of deaths among members not only contradicted this belief but was a potential source of strain upon the pivotal idea of translation itself. After 1881, physical death was defined as one of the ways in which some of the saints might undergo their translation, but the idea of miraculous collective flight from the earthly scene by the "remnant" continued to be at the forefront of the group's image of its future for many years.

The prophetically fulfilling claims that exerted the most profound impact upon the movement were those advanced in connection with the failures of 1914–25. In claiming that the "Time of the Gentiles had expired" exactly on schedule in 1914, the group was laying the symbolic ground for its own subsequent radicalization. The full meaning of this claim remained somewhat unclear for a time, but its general implication was that the legitimacy of earthly governments and other institutions had been downgraded in the eyes of God. Although this was not interpreted as calling for abandonment of the previous policy of obeying secular laws which did not violate the laws of God, it did predispose the movement to adopt a more militant stance. The declaration also reduced the symbolic distance between the present and the envisaged "end," discernible in the shift to short-term prophesying at this point, a factor further encouraging the adoption of bolder tactics. In fact, the evangelistic campaigns of 1914–18 proved to be so bold that they precipitated serious difficulties with governmental authorities and resulted in the imprisonment of several of the movement's leaders (Stroup 1945; Watchtower Bible and Tract Society 1959).

The claims advanced later that in 1918 Christ had "entered his temple for the purpose of judgment," that he had assumed his "right to rule," had cast Satan down to Earth, and had, in effect, inaugurated the heavenly portion of the Kingdom, supplied additional grounds for a fundamental change in group identity and mission. In 1925, a short time before the translation was expected, a new revelation was announced regarding the fuller significance of the year 1918: it heralded "the birth of a New Nation." In that year Christ inaugurated a supernatural "government," with himself as "King." Having cast Satan and his hordes from the Earth as well in the Battle of Armageddon, the government's hegemony would be

extended over the whole world. While this New Nation was, at the moment, mainly an extramundane establishment, members of the movement were its loyal earthly citizens and "ambassadors." While awaiting their own "crowning," they were to prepare the way for the new government's assumption of universal authority (*Watchtower*, March 1, 1925).

Besides helping to assimilate prior prophetic failures more fully, the 1925 announcement served to offset the prospective failure which faced the movement at this time. It was, in fact, accompanied by the suspension of future date setting, thus eliminating this long-standing source of instability. Cosmic history had moved into its very last stage; the Kingdom had *begun* to be established. The Battle of Armageddon, through which the Kingdom would assume control over the Earth, still lay in the future, but "no man knew the time nor the hour" of its coming.

From this time onward, the image of the New Nation became the main symbolic anchorage for the movement's self-conception. The sect was no longer to conceive of itself merely as the agency for completing the ranks of the 144,000 who were to rule with Christ. This mission had been completed. God had ordained, however, that the "anointed remnant" still on earth were to play an important role in preparing the way for the Kingdom's fuller triumph. A twofold mission was derived from this view: (1) to recruit and train a "Great Company" of righteously disposed people who, in the safety of the "Lord's Organization," would be "carried through Armageddon" and would be privileged to live in the earthly Kingdom as perfect physical creatures; and (2) to expose the machinations of Satan in trying to obstruct the Kingdom's earthly establishment (Rutherford 1928, 1932).

Evangelistic activity came to be reorganized around these two goals. Although the Great Company recruiting ground was, at first, identified with the movement's earlier reference group, it underwent extension to include non-Protestants, non-whites, and those without church affiliation.[8] As an earthly enterprise, the movement no longer conceived of itself as temporary nor inherently limited in ultimate size. Having a role now not only in the heavenly phase of the Kingdom but in the earthly phase as well, its own earthly future was endless and its expected ultimate size infinitely larger than 144,000. While the status of new converts remained ambiguous for several years, by the middle thirties a distinction between two categories of members had emerged: the "Anointed class" (those who joined before the "special harvest call" had ceased and who were destined to become a part of Christ's heavenly government) and the "Jonadab class" (those who joined more recently in response to the "general call" and who were destined to inherit the New Earth as perfect physical creatures) (Rutherford 1932; *Watchtower*, August 1 and 15, 1935).

[8] See the yearbooks published by the Watchtower Society for the period 1926–32.

Even more striking changes occurred in the course of the movement efforts to discharge its second mission of "exposure." A doctrine of Satani conspiracy was developed, emphasizing the "unholy alliance" betwee the "commercial, political, and religious powers" to "exploit the commo people" and to oppose Jehovah and his Kingdom. Through identificatio with the figure of Satan, recently "cast down to Earth," the major in stitutional spheres thus came to be defined as havens of wickedness, a sources of injustice and oppression, and accordingly as appropriate object not only of avoidance but of vigorous verbal assault. In the late twenties doctrinal revision was introduced regarding the meaning of the "Highe Powers" to which the Bible urged subjection (*Watchtower*, June 1, 1929 It was now declared that the phrase did not refer to secular authoritie but rather to "Jehovah God and Christ Jesus." This was part of th context in which the group shortly became involved in flag-salute con troversies with authorities throughout the country (Manwaring 1962)

The focus of the movement's chiliasm changed from awaiting its col lective escape from earth to waiting for the impending destruction o the present order in the Battle of Armageddon. The image of Armageddo as a class war was changed to that of a war between "Satan's Organization" and the "Lord's Organization" for hegemony over the earth. The sec continued to adhere to the belief that it would not be a direct combatan in the war, but the anticipatory image of the Battle nevertheless exerted influence upon the movement's operations. The group's evangelistic pro grams became progressively radical in content and more aggressive in execution.[9] The present was perceived as the preliminary "staging" phase of the Great Battle, during which people were being given an opportunity to "choose sides." The conviction of the Battle's imminence was kept alive but the chiliastic zeal thus generated was channelized mainly into militant evangelistic forays against Satan's Organization. A concerted drive was now made to enlist every member in these assaults. Evangelism came to be linked to a broader range of supernatural issues, such as the "vindication of Jehovah's name." The enlarged identity salience of preaching was well expressed in the change of the sect's name in 1931 from Bible Students to Jehovah's Witnesses (Watchtower Bible and Tract Society 1931).

In reorganizing the movement's identity around militant preaching and in defining the latter as battling against Satan and witnessing for Jehovah, the major source of identity validation was shifted from prophetic ful-fillment to evangelization per se. In its identity-affirming aspects, evan-gelistic success was to be measured not only in terms of the numbers of converts won, but also in terms of the volume, extensiveness, and vigor of the preaching effort, and even the negative reactions it evoked. This shift also entailed changes in such supplementary sources of internal identity

[9] For examples, see Rutherford (1928, 1937).

support as the previously institutionalized cult of character development, which had played an important role in sustaining the group's earlier pietistic identity. The latter type of rather introverted cultivation of the fruits of the Spirit had little place in the new identity design and, in fact, came to be eliminated (*Watchtower*, November 1, 1933).

The movement's steady drift in an aggressively antiworldly direction after 1925 was reinforced by the correspondingly aggressive reactions of other groups to its militant and often offensive campaigns. Organized opposition against the movement increased steadily, reaching serious proportions by the early forties. During the year 1940 alone more than 335 cases of mob violence against the group were reported in 44 states (American Civil Liberties Union 1941, p. 3). Arrests of group members became widespread. The sect responded with renewed displays of militancy, challenging arrests through vigorous court action and developing tactical innovations to circumvent obstructions to its activities. In all of this, group leaders made adroit use of conflict incidents to bolster the movement's solidarity and to confirm its new identity. Chiliastic sentiment received reinforcement from the same source, particularly in the form of a deepening conviction that Armageddon was nearing.

While functional in affirming the sect's new image of itself and in sustaining its chiliasm, the pattern of militant evangelism turned out to be rather costly. The increasingly serious waves of persecution taxed the movement's resources, resulted in damage to its public image, and retarded its rate of growth. It became clear that still another round of adaptation was called for before the movement achieved stability. This has, in fact, been happening since the middle and late forties.

RECENT ADAPTATIONS[10]

Proselytism has remained the central preoccupation of the group, but the avowed purposes of preaching have undergone some redefinition, with consequent changes in its content and techniques. Thus, there has been a deemphasis of one aspect of the sect's previous mission, that of "declaring Jehovah's judgment" upon the Satanically dominated world. Recent definitions of the group's mission have dwelt upon its more positive educational and salvational aspects. Evangelism has thus become, in large part, a "warning and rescue" operation, with "deliverance" as one of its major themes (Watchtower Bible and Tract Society 1961). The view of the prevailing order as doomed continues to be held as strongly as ever; but the vituperative attempts at institutional discreditation have been markedly toned down. Members have been urged to exercise "theocratic tact"

[10] This portion of the analysis is based upon participant observation, intensive interviews with sect members, as well as an examination of the group's literature.

in their preaching, to avoid direct attacks on other religious grou and to refrain from making other remarks which might be construed offensive.

Still another evidence of ideological retrenchment is the recent rede nition of the Higher Powers concept. The Higher Powers (now referr to as "superior authorities") have once again been identified with secul governments, to which the sect now acknowledges "relative subjectio (Watchtower Bible and Tract Society 1966*b*). The sect has similar been emphasizing its attributes as a purely religious organization, a "S ciety of Ministers," politically neutral, peaceable, and law-abiding.

This general pattern of accommodative restraint in the group's publ presentations of itself has not only reduced reactive persecution but h also yielded significant returns in organizational growth. During its fir forty years under the leadership of its founder, the movement in Ameri had reached the size of about 20,000. During the next twenty-five yea under his successor, it grew to about 62,000 (Watchtower Bible and Tra Society 1941). But the most spectacular increases have been realized duri the last twenty-five years under the movement's third leader. By 196 the American sector of the movement reported a "peak" of 318,559 mem bers (Watchtower Bible and Tract Society 1966*a*, p. 36).

It needs to be emphasized that this recent decline in militancy has n been at the expense of the group's sectarian rigor. The group has not onl maintained its polarity vis-à-vis the world but has continued to cultivat marks of distinctiveness. The publication of its own version of the Bibl in the sixties would be only one example of such continued differentiatio

The movement might be described, then, as currently passing throug another cycle of change in its sectarian style. It is becoming less anti worldly and more transworldly in its outlook. While its millennial drean still looks to the future for completion, it is cast in terms of earthly renewa rather than earthly escape. In this connection it is interesting to note tha questions of an ethical nature have come to receive increasing attentio within recent years and that disfellowshipments on moral grounds hav become more frequent.[11] This is not to suggest that the group is espousing the view that the Kingdom will be established on earth through the group's own spiritual perfection or its moral uplift of humanity. The triumph of God's Kingdom under Christ is no moral allegory but is rather still conceived of as a supernaturally engineered revolution, concrete rather than abstract, cataclysmic rather than peaceful, imminent rather than remote. The sect's refocused chiliasm has been maintained with the aid of the various symbolic techniques previously developed. The resultant feeling in the sect today is not simply that the end has been delayed these many

[11] For an example of this renewed moral emphasis, see Watchtower Bible and Tract Society (1967, pp. 170–86).

years but rather that the world has been moving steadily closer to it.

Interestingly, after refraining from dated prophesying since 1925, the group has recently begun to revitalize its chiliasm by pinning it once again to a more or less definite time. The year 1975, believed to mark the end of the sixth millennium since Adam's creation and the beginning of the seventh, is presently being discussed as a turning point of prophetic significance. This seventh millennium in world history, it is believed, will coincide with Christ's thousand-year reign over the earth, and is expected to usher in the long-awaited "worldwide jubilee" (Watchtower Bible and Tract Society 1966*b*). While return to this old strategy would seem to expose the sect once again to prophetic failure, the risks are balanced by the potent ideological reinforcement accruing from this forthright renewal of faith, which thirty-five years of diffuse watchful waiting seem to have made necessary. Considering the movement's long-term development, the risks of another serious prophetic failure actually appear to be minimal. The new prophecy is being phrased in a manner that lends itself to "confirmation" by the old device of claiming partial supernatural fulfillment, and the group has given itself a thousand years for the remainder of its millennial dream to be realized. If, however, in 1975 the group does advance the claim that the millennial reign of Christ over the earth has indeed begun, some new developments in its collective identity may be forthcoming.

CONCLUSIONS

Contemporary sociologists of religion have questioned the generalizations ventured by earlier theorists regarding the organizational changes which sectarian movements typically undergo in the course of their institutionalization over time (Pfautz 1955; Wilson 1959, 1961; Yinger 1946, 1957).[12] The career of the Witness movement supports this line of theoretical criticism. Considering the organizational hazards to which millenarian groups would seem to be peculiarly vulnerable, the success of the Witnesses in sustaining their chiliastic fervor over more than nine decades is an instructive example of the capacity of sectarian groups to adapt to crises, to perpetuate themselves, and to grow without appreciable capitulation to the "world" in the realm of values. The present case, in fact, indicates that a sectarian group may undergo an intensification of its rigor and militance over time. More interesting still is the demonstration that a sectarian movement may develop successively different collective identities, expressing qualitatively distinctive styles of "antiworldliness," while maintaining its organizational continuity (see Wilson 1959).

The major key to the group's success in keeping its millennial hopes

[12] For a broader critique of the standard Weber-Michels model of institutionalization as applied to secular social movement organizations as well, see Zald and Ash (1966).

alive and in resisting secularisation has been its development of an essentially self-confirming and socially isolating symbolic-interactional system which has sustained its basic convictions and reduced its stakes in the present world. Significant portions of the group's symbolic system were designed to define the supernatural realm and did so in a manner that subordinated the "reality status" of the empirical world per se. The supernatural world was assigned psychological priority as an object of concern and as a source of meaning. Empirical events were perceived as occurring within this broader nonempirical context, and an understanding of their "true" significance required viewing them within the frame of reference supplied by the group's symbolic system. The logic of demonstration used to validate reality constructions was quite different from that normally employed by "common sense" or "science" (see Geertz 1957, 1965; Schutz 1955).

The millenarian complex to which the movement developed an early commitment was premised on a teleological, indeed a predestinarian, theory of the historical process. Human history was believed to follow an essentially predetermined course, in conformity with the Divine Plan. The sect's prophetic declarations were public affirmations of faith in the inexorable outworkings of this Plan. The belief system constrained the group to develop an anticipatory orientation that blurred the distinction between the present and the future. In the millenarian perspective, the present tended to be defined projectively, being imbued with meanings derived from the group's expectations regarding the unfolding future. The history of the past century has conveniently provided an objective context favorable to sustaining the group's chiliasm, in the form of an abundant flow of socially disturbing events that lent themselves to selective interpretation as visible signs of the approaching end.

The processes of self-confirmation, however, were anchored in and mediated by the group's organizational structure and interactional dynamics (see Lofland 1966; Merton 1957; Simmons 1964). Ultimately, it was the capacity of this social microcosm to provide internal consensual validation for its beliefs and expectations, to "out-compete" other groups in imposing upon reality its own symbolic constructions, that made it an agency of prophetic self-fulfillment. A detailed examination of this structural and interactional aspect of the process of self-confirmation is beyond the scope of the present paper, but brief mention may be made of a few of its more important features.[13]

One was the movement's provisions for the social-psychological insulation of its membership from other groups whose value orientations were different. The cultivation of social exclusiveness, the discreditation of other groups, the debunking of secular authority, the elevation of internal

[13] For a more detailed analysis, see Zygmunt (1953, 1967).

group roles to a position of dominance in the life organization of members, were among the major ways in which this was accomplished. The sect's belief system led it to develop a decidedly negative and pessimistic world view which discouraged involvement in social projects of a melioristic sort. The prevailing social order was regarded as irreparably evil and beyond reform. Human salvation was to come, not through moral uplift or gradual institutional renovation, but rather through cataclysmic, supernaturally mediated revolution. The movement's negative world view and its cataclysmic theory of salvation fostered an estrangement from external reference groups which might have induced outlooks and concerns favorable to secularization. The sect's conception of itself as an exclusive, divinely chosen elite, whose status was not dependent upon external social validation, served as a psychological insulating device. The provision of nonworldly standards and modes of identity validation helped to maintain the group's separateness from the world. The development of a supportive ethical system which encouraged minimal or marginal secular participation and discouraged upward mobility was an additional obstacle to secularization.

The evangelistic campaigns and programs of the movement, a central feature of its organizational life, were likewise of extraordinary significance in occasioning frequent public declarations of faith and defenses of its foundations, which deepened the believer's commitments to the sect. Insofar as it was successful, proselytism broadened the consensual base supporting the belief system. Insofar as it failed, it confirmed the group's conviction that only a select few were spiritually equipped to discern the truth Insofar as it provoked opposition, it reinforced the group's alienation from the world and confirmed its self-image as a band of moral heroes, who, in Christlike fashion, were persevering through suffering to implement the purposes of Jehovah.

Certain features of the sect's recruitment system deserve mention in this connection also. The liberalization, and presumed secularization, of group standards of membership in the normal process of striving for cross-generational continuity has been emphasized in the theoretical literature as one of the typical sources of denominational drift (Niebuhr 1920; Pope 1942). Some writers have questioned the alleged inevitability of such declining rigor and have pointed to the retention of exacting standards of admission as an important feature of the "institutionalized sect" (Pfautz 1955, Wilson 1961; Yinger 1957). The Witness sect confirms this observation The evangelistic orientation of the group, furthermore, predisposed it to focus mainly upon external rather than internal sources for its recruits, and its demands upon these recruits have remained quite rigorous.

Despite the symbolic and structural provisions for self-confirmation and despite propitious external events, our analysis also indicates that

the group has been obliged to adapt itself to inner and outer exigencies some of its own making, others beyond its control. In thus struggling to maintain its continuity, it has undergone significant changes.

The most interesting of these is the succession of collective identity patterns which the group developed within the broader framework of its millenarian belief system, each characterized by a more or less distinctive self-concept, orientation toward the world and mission, and expressed in a different "sectarian style." This developmental progression from a superworldly to an antiworldly to a transworldly identity pattern was, to a large degree, occasioned and encouraged by the sect's own prophecies and its need to confirm them in the eyes of believers. While the public issuance of prophecies was a sustaining affirmation of faith, it was also a test of faith and a source of identity crises in the form of prophetic failures. Within the sect's symbolic-interactional framework, prophecies became essentially self-fulfilling, but their claimed fulfillment also proved to be a source of change in perspective and mission.

Several features of this process of symbolically induced change deserve notice. First, the prophecies were phrased in a manner that made them only partially open to disconfirmation. As already indicated, they were derived from the broader belief system and had both supernatural and empirical reference. Insofar as they pertained to prospective events of a supernatural character, the group's faith in its own belief system provided a basis for the claim of fulfillment, and the selective perception of "objective" events, under the influence of the belief system, furnished supportive "empirical" evidence. In this sense and to this extent, the prophecies could not "fail."

On the other hand, insofar as the prophecies referred to empirical events, the group's private and public commitment to their realization thrust it into a succession of predicaments. Considering the extreme nature of some of the predictions (e.g., that the group would vanish from the earthly scene or that the world would undergo extensive cataclysmic changes), prophetic failure was inevitable and could not simply be denied. It could, however, be met by restructuring some of the group's beliefs to reduce cognitive dissonance and to restore chiliastic faith on a revised basis. This was accomplished by conceding error with respect to those empirical predictions which clearly had not been realized, rationalized in terms of the fallibility of human judgment, but welcomed as divinely provided lessons revealing God's purposes more fully. Such admitted errors were merely chronological and not substantive, however. Unfulfilled prophecies, the group believed, would surely come to pass in the proximate future. With the addition of retrospective reinterpretations of the prophetic significance of previously announced dates, prophetic failures were con-

verted into partial successes, sustaining chiliastic sentiment and providing a basis for renewed prophesying and evangelization.

The generalization ventured by Festinger, Riecken, and Schachter (1956) that prophetic failure, under certain conditions, induces a group to increase its proselytization in an effort to resolve cognitive dissonance applies to the Witness sect, but with some qualifications. Its level of evangelistic activity tended to decline immediately after prophetic failure. Proselytization had to be relegitimated before it could be resumed with its former vigor, and this required an intervening process of redefinition. The group's prophecies had, from the outset, been phrased in a manner that was almost certain to precipitate crises in group mission in the face of prophetic failure. They not only predicted the end of the existing earthly order but, in effect, specified the expiration of the group's earthly mission. The decline in proselytization which followed each episode of prophetic failure was, in part, due to this. The revival and expansion of proselytization had to await the fuller resolution of the group's quandary, and a renewal, on this basis, of its mandate to evangelize, generally involving a redefinition of evangelistic goals. But proselytization was, nevertheless, eventually resumed and increased, and its reinstitution was important in sustaining organizational continuity.

Reliance on these strategies to meet the series of prophetic failures, however, had a cumulative impact upon the group's self-conception, its world view, as well as its mission.[14] Because prophecies were, in effect, prospective definitions of situations, their claimed fulfillments made them a part of the present reality framework within which the group lived and acted. In this fashion, the group's image of the future came to be progressively assimilated into its definition of the present.

While factors endogenous to the sect itself would seem to have been the main elements in activating the self-fulfilling prophecy mechanism in this case, the role of exogenous factors needs to be noted. Thus, for example, the aggressive content and tactics of the sect's evangelization during its militant phase, based on its definition of the world as Satanically dominated and filled with "enemies," triggered formidable opposition, which, in turn, confirmed the sect's initial outlook and reinforced its chiliastic zeal. When such intensified conflict came to be perceived as organizationally costly, the stage was set for another cycle of change, the

[14] Crises precipitated by prophetic failures were not the only agencies of organizational change. After the death of Russell in 1916, the sect experienced a serious succession crisis which resulted in considerable disunity and several schisms. Rutherford's efforts to cope with this set of organizational problems were of considerable importance in transforming the group both ideologically and structurally. But the "routinization of charisma" which occurred during Rutherford's regime was accompanied by a radicalization of outlook rather than a conservative retrenchment (see Zygmunt [1967, pp. 735 ff.]; cf. Zald and Ash [1966]).

sect receding from its militant posture to a position of neutrality, aloofness, or marginality. Such tactical moderation has been conducive to rapid membership growth, which, in turn, has sustained the new attitude of neutralism and reinforced the group's self-image as an agency of prophetic fulfillment. Despite rapid expansion and the development of a hierarchical and bureaucratic structure, however, the organization continues to adhere quite strongly to the ideological traits of a "sect."

While undergoing ideological and structural changes, the sect has not only retained its millenarian character but has managed to adapt its millenarian style to the requirements of long-term organizational survival. The expectation of miraculous escape from earth, an early source of prophetic failure and disappointment, has been abandoned; the previously limited conception of the group's earthly future has been extended; its original image of itself as a little flock of preordained size has been enlarged; its recruiting ground has been expanded; its proselytization has been maintained at a high level and intensified. Date setting, which had precipitated prophetic failures in the past, was eventually suspended. Its current revival, in connection with a loosely phrased, not easily disconfirmable set of prophecies, embracing an epoch of a thousand years, is not likely to be disorganizing, but seems rather to be having a revitalizing effect. The sect has, thus far, refrained from advancing the claim which has often marked the transformation of millenarian sects into "denominations" and "churches"; namely, that the Kingdom of God has already been established on earth. In long-term perspective, the sect approximates Zald and Ash's (1966) characterization of the "perfectly stable" movement organization, as "one which over time always seemed to be getting closer to its goal without quite attaining it."

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Religious Intermarriage in a Denominational Society

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Data from the 1957 Current Population Survey of Religion and from the NORC study of June 1961 college graduates indicate that denominational homogeneity in marriage exists for at least three-quarters of the major religious denominations, including the various groups within Protestantism.

The United States is a denominational society, that is, a society in which membership in religious denominations plays a considerable role in determining patterns of interaction which establish the social structure. It was indeed a religiously pluralistic nation before it became a politically pluralistic one, and one of the reasons the founding fathers were constrained to keep it politically pluralistic was the denominational heterogeneity of the various liberated colonies.

While sociologists have argued about and refined considerably Will Herberg's notion of religion as a provider of "social location" in the United States, few have questioned the validity of his basic insight. This paper has two modest goals: (1) to suggest that Herberg's categories of Protestant, Catholic, and Jew are not comprehensive enough—the various denominations within the category "Protestant" still constitute important subcollectivities in the larger society; and (2) to suggest that, if denominational intermarriage is used as an indicator, there does not seem to be an appreciable decline in denominational membership.

Most research done on religious intermarriage lumps all Protestant denominations together, if only because it requires very large samples to make possible the distribution of Protestants into the various denominations. The evidence in these studies seems to indicate that Jews are the least likely to marry members of other faiths, Catholics most likely, and Protestants somewhere in between. However, the release of the tabulations of the 1957 Current Population Survey of Religion enables us to determine rates of religious intermarriage for a number of the Protestant denominations. The first row in table 1 provides the rather striking information that approximately four-fifths of the members of each of the four Protestant denominations are married to people whose present religious affiliation is the same as their own. Not only are Protestants married to other Protestants, as previous studies have shown, but they are married to Protestants who share the same denominational affiliation. And the ratio of mixed marriages *does not vary much across denominational lines*.

The 1957 census data contained information for the whole population. If there had been some decline in homogeneity of denominational affiliation, one would expect to find evidence of it among the young and the better educated. Furthermore, one would expect that the date gathered after 1957 would show such a change.

In 1968, eleven years after the national census of religion, NORC collected data on original and present religious denominations of both the respondent and spouse, as part of its ongoing study of June 1961 college

TABLE 1

DENOMINATIONAL INTERMARRIAGE (%)

Denominational Intermarriage	Catholic	Baptist	Lutheran	Methodist	Presbyterian	Jew
Proportion of U.S. population married to member of same denomination in 1957	88	83	81	81	81	94
Proportion of 1961 alumni married to member of same denomination in 1968	86 (1,130)	84 (355)	83 (354)	86 (712)	78 (402)	97 (353)
Proportion of alumni in which marriage took place between two people whose original denomination was the same and who currently belong to that denomination	75	35	34	30	15	94
Proportion of alumni whose original denomination has remained unchanged and whose spouse has converted to that denomination	11	14	22	16	15	2

graduates. The second row in table 1 shows the proportions of the major denominations who are presently married to spouses who share the same religious affiliation. There is virtually no difference between the endogamy ratios for young college alumni in 1968 and the general population in 1957. The tendency to seek denominational homogeneity in marriage does not seem to have weakened in the slightest.

The first two rows in the table represent data indicating present denominational affiliation of both respondent and spouse, but they do not tell us whether the denominational homogeneity in marriage has been attained by marrying within one's own denomination, or by substantial conversions at the time of marriage (or at least in relation to the marriage).

However, the third row in table 1 shows the proportion of respondents who married a spouse whose original religious denomination was the same as their own, with both now practicing that religion. It becomes clear that denominational homogeneity is maintained by Catholics and Jews through the process of marrying within one's own denominational boundaries, whereas it is maintained by other religious groups largely through considerable shifting of denominational affiliations. For Catholics and Jews it is important that one marry within one's own denomination (and far more important for Jews than for Catholics). When Catholics marry into other denominations, the non-Catholic is likely to convert. Protestants may marry across denominational lines, but then denominational change occurs in order to maintain religious homogeneity in the family environment.

It also appears from the fourth row in table 1 that those of Lutheran background are able to attract a considerable proportion of their non-Lutheran spouses to join their own Lutheran denomination; thus one-fifth of the Lutherans have married people who have converted to Lutheranism but none of the other three major Protestant denominations seem to have any special relative strength in the game of denominational musical chairs that is required to maintain the family religious homogeneity.

We do not know, of course, whether the patterns of denominational change to maintain homogeneity observed in the college population is the same as the pattern in the more general population, since the 1957 census did not provide information about original denominational affiliation. However, further research on the subject is clearly indicated.

In summary, then, one may say that America is still very much a denominational society to the extent that denominational homogeneity in marriage exists for at least three-quarters of the major religious denominations.[1]

One may speculate that the strain toward denominational homogeneity is rooted in the American belief that religious differences between husband and wife are not good either for the marriage relationship or for the children of the marriage. This belief is probably reinforced by the fact that it is simpler and more convenient that everyone in the family belong to the same denomination. For example, one need not worry about two sets of contributions to the support of one's church. Whether the maintenance of high levels of denominational homogeneity in marriage has any specifically religious or doctrinal significance may be open to question. Nevertheless,

[1] Denominational homogeneity in marriage seems equally important in another denominational society, Canada. In 1967, 69 percent of the marriages which took place in Canada were between members of the same denomination, a slight dip from the 71 percent of 1957. It should be noted that this statistic represents homogeneity at time of marriage. Presumably some postmatrimonial conversions would push the Canadian statistic even closer to the one for the United States (cf. 1968, p. 284).

it is still extremely important in American society that one's spouse be of the same religious denomination as oneself.

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The Academic Marketplace Revisited: A Study of Faculty Mobility Using the Cartter Ratings[1]

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This study examines the characteristics of faculty who joined the top twenty departments in six disciplines between 1963 and 1966 in order to evaluate the relative importance of prestige of doctoral origin and scholarly performance in the selection for a position in these departments. While there is a weak relationship between rank of doctorate and rank of hiring department, graduates from departments with the highest ranks are much more likely to be hired by all the top twenty departments. When rank of academic affiliation and levels of productivity, citations, and recognition are controlled, the proportion of graduates hired from the highest ranking departments remains the same. Among senior faculty, this proportion diminishes slightly when these factors are controlled. These findings suggest that, among younger faculty, prestige of doctorate rather than past performance is used as a predictor of future performance by those who are responsible for faculty recruitment.

Sociologists are accustomed to viewing the entire society as a stratification system (Glass 1954; Rogoff 1953) but have been less concerned with the fact that classes of organizations within any particular society form separate stratification systems. For example, there are hierarchies of law firms (Carlin 1966), business organizations, medical schools (Finland 1964; Hall 1948), and universities (Caplow and McGee 1961; Berelson 1960). These smaller systems can contribute to our understanding of social mobility.

One of the principal concerns in the study of social mobility has been the extent to which sons inherit the social class status of their fathers. At issue is the relative importance of achieved and ascribed characteristics in determining career patterns. In the academic stratification system, this problem becomes one of the relationship between prestige of doctorate, scholarly performance, and selection for a position in a leading department. Several studies have found correlations between scholarly productivity and membership in "leading" departments (Berelson 1960, p. 127; Cole and Cole 1967; Crane 1965; Hargens and Hagstrom 1967). Other studies have found a relationship between quality of research publications (as measured by frequency of citation) and location in these departments (Cole and Cole 1967; Cole 1968). However, the relationship between location and performance could reflect only the effect of the present institution

[1] I am grateful for the assistance of Jean Castells, Carol Cofrancesco, Mary Elizabeth Hintze, and Savin Ungaro in the collection of the data upon which this study is based.

upon performance, since high-ranking universities generally provide better environments for research than do lesser institutions.[2]

Caplow and McGee (1961) examined the process of faculty replacement by the liberal arts departments of nine major universities and concluded that the prestige of the candidate rather than his scholarly performance per se was salient. There was a relationship between this factor and the prestige of the department hiring him. Both Caplow and McGee and Berelson (1960, pp. 113–15) stressed the effect of the prestige of the doctorate upon the individual's opportunities for mobility in the academic stratification system. However, Brown (1967), looking at the entire system, found a relationship between productivity and upward mobility. Hargens and Hagstrom (1967) inferred from their data on the relationship between academic location and other characteristics that productivity was related to mobility in the lower strata, while prestige of doctorate influenced mobility in the upper strata of academia.

The publication of the American Council on Education ratings (Cartter 1966) has made it possible to examine academic stratification in greater detail. Using data on the mobility of faculty among the twenty leading departments in several disciplines, we would expect that prestige of doctorate would have more influence than performance upon the selection of a candidate by a top-ranking department.

Cartter ranked the twenty leading departments in each of twenty-nine disciplines.[3] For the present study, information was obtained about all faculty hired by the twenty leading departments in four types of disciplines during a three-year period: the natural sciences (chemistry and physics), the biological sciences (psychology), the social sciences (economics), and the humanities (English and philosophy). Since the ratings were made in the spring of 1964, the academic years 1963–64, 1964–65, and 1965–66 were chosen. The ratings were not published until May 1966 and thus could not have affected the hiring policies for the years studied. Names of all faculty with the rank of assistant professor or above appearing for the

[2] Hagstrom (1968) has presented data which show a correlation between prestige of academic department and productivity when variables such as number of research assistants, availability of research funds, and time for research are held constant. However, he points out that less tangible variables such as normative climates and ease of communication in these departments may have more significant effects upon productivity. Previous research by the writer (Crane 1965) on the effects of academic environment upon research productivity suggests that the amount of time during which research funds have been plentiful in a setting has an effect upon productivity. The atmospheres of universities which are in the process of becoming research oriented are less stimulating than those of universities which have been research oriented for longer periods.

[3] Cartter obtained ratings of graduate departments from approximately 900 department chairmen, 1,700 distinguished senior scholars, and 1,400 junior scholars. Departments below the top twenty were grouped into three categories: good, adequate plus, and other

first time in departmental listings in university catalogs during the years covered by the study were selected for the sample.[4] Biographical items were sought either from directories[5] or through brief letters. Information was obtained by either of these methods for 79 percent of the sample. For some of the disciplines, additional information was obtained from reference sources regarding productivity, the number of times publications had been cited, and the number of honors received.[6] These items provide approximate measures of quantity and quality of scholarly performance.

[4] Those whose period of employment commenced in each of these academic years were actually hired during the preceding year so that the years during which the hiring was done represent the academic year before the ratings, the academic year of the ratings, and the academic year after the ratings. Faculty who held joint appointments in two departments of the same university were excluded from the sample. However, faculty who held joint appointments in a department and in a research institute were included. Research associates who were hired prior to 1963–64 and who obtained the rank of assistant professor or higher during the period 1963–66 were included. Instructors and lecturers who were hired between 1963 and 1966 were included only if they became assistant professors by 1966–67. Twenty individuals who were hired by two leading departments during this time period are each included twice in the sample (once for each time they were hired).

[5] *American Men of Science* (10th and 11th editions) and directories of professional associations were searched for biographies.

[6] Data on productivity during the years 1959 through 1965 were obtained for faculty in economics, English, and physics from *Science Abstracts, Section A: Physics Abstracts*, the *Index of Economic Journals* (American Economic Association 1962, 1965, 1967), "Index to New Books," *American Economic Review*, 1959–65, and the *Annual Bibliography of English Language and Literature* (Modern Humanities Association 1959–65). Junior and senior authors are listed in these sources. Full first names appear in the sources for economics and English. Initials are used in place of full first names in *Science Abstracts*, producing some difficulties with respect to identification. Dates of publication in the *Annual Bibliography of English Language and Literature* did not always coincide precisely with the dates used in the codes. Information was unavailable for 3 percent of this subsample Books published in economics and English were weighted four times as heavily as single article. The *Science Citation Index*, 1964 (Institute for Scientific Information 1966), was used to obtain data regarding the number of times the publications of physicists, chemists, and psychologists in the sample had been cited. Use of this index underestimates the amount of citation, since only senior authors are listed and some authors are difficult to identify (only initials are given for first names). In cases where there was some ambiguity regarding identification of an individual in the index, information about scientific field and year of publication was sometimes helpful. Otherwise, such data were not coded. Information could not be obtained for 4 percent of the subsample for which these data were sought. Self-citations were excluded. Recognition was coded for faculty in physics, chemistry, English, and philosophy, using biographies from *American Men of Science* and information supplied by respondents where biographies were not available. Minor honors included editorships of journals, service on government advisory panels, honorary fellowships, and prizes awarded by professional societies. Major awards included presidencies of professional associations, honorary society memberships, and honorary degrees from universities other than an alma mater. Major awards were scored twice the value of minor awards. This information was unavailable for 4 percent of this subsample

PRESTIGE, PERFORMANCE, AND MOBILITY

Not surprisingly, the present sample is composed largely of young and relatively inexperienced men.[7] Sixty-six percent were assistant professors, the remainder being divided almost equally among instructors, associate, and full professors. Thirty-five percent had not held any position previously.

Table 1 shows that, at each level of the twenty leading departments, a higher proportion of those hired had degrees from the top five departments than from any other level of the system. Almost twice as many graduates of the top five schools were hired by the leading twenty departments as were graduates of the next five schools (38 percent compared with 20 percent).

TABLE 1

RANK OF GRADUATE SCHOOL BY RANK OF HIRING DEPARTMENT AMONG FACULTY HIRED BY TWENTY LEADING DEPARTMENTS IN SIX DISCIPLINES, 1963–66

	Rank of Hiring Department				
Rank of Graduate School	1–5	6–10	11–15	16–20	Total
1–5	52	35	32	31	38
6–10	16	26	19	17	20
11–15	11	8	17	10	11
16–20	5	8	7	12	8
All other American universities	8	10	14	18	12
Foreign universities	5	9	10	10	8
No Ph.D., no inf.	2	3	1	2	3
Total*	99	99	100	100	100
N	209	214	178	179	780

NOTE.—$r = .181$.

* In this and subsequent tables, percentages may not total 100 due to rounding error.

This cannot be explained on the basis that a higher number of doctorates are awarded by these schools; this is not the case.[8] Nineteen percent of those hired had obtained their degrees from departments with ranks eleven through twenty. These departments were only slightly ahead of all the remaining graduate departments. Only 12 percent of the faculty hired by these twenty departments had obtained degrees from American departments outside of the top twenty. Since departments at all ranks in the top twenty favored graduates of the top five departments, the correlation be-

[7] Sex of the sample members was determined from first names. Five percent of the 712 members of the sample for whom this information was available were female.

[8] Excluding doctorates in education, the five leading universities produced 14 percent of the doctorates awarded by American universities in 1960–62 (computed from Tolliver 1962–63). At no time since the 1930s have the top ten universities awarded more than 38 percent of the doctorates granted by all American universities (Cartter 1966, p. 120).

tween rank of hiring department and rank of graduate degree is not high ($r = .181$).

"Inbreeding" was pervasive. Thirteen percent obtained positions in the departments from which they had received their degrees.[9] Excluding these individuals, the correlation between rank of current affiliation and rank of graduate degree decreased ($r = .100$). The predominance of graduates of the top five departments among those selected remained (see table 2).

When inbreeding was excluded, graduates of departments within the top twenty who were hired by one of these departments[10] were likely to

TABLE 2

RANK OF GRADUATE SCHOOL BY RANK OF HIRING DEPARTMENT AMONG FACULTY HIRED BY TWENTY LEADING DEPARTMENTS IN SIX DISCIPLINES, 1963–66, EXCLUDING FACULTY HIRED BY DEPARTMENT OF GRADUATE TRAINING

	Rank of Hiring Department				
Rank of Graduate School	1–5	6–10	11–15	16–20	Total
1–5	38	40	35	33	37
6–10	20	16	21	19	19
11–15	14	9	10	11	11
16–20	7	10	8	5	8
All other American universities	10	12	15	19	14
Foreign universities	7	10	10	10	9
No Ph.D., no inf.	3	4	1	2	3
Total	99	101	100	99	101
N	159	188	163	166	676

NOTE.—$r = .100$

[9] "Inbreeding" appeared to be a characteristic of certain types of departments. Twenty-four percent of those hired by the top five departments were placed in the departments from which they had received their Ph.D. degrees, compared with 12 percent among those hired by the next five departments and 8 percent among those hired by departments in ranks eleven to twenty. Berelson (1960, pp. 115–16) reports similar findings. Private universities were more likely to engage in this practice than public universities. Eighteen percent of those hired by private universities were hired by their graduate departments, compared with 10 percent of those hired by state universities. Size of department was also related to "inbreeding." Of those hired by departments with over sixty members, 35 percent were being hired by the departments from which they had received their degrees, compared with 12 percent for those being hired by departments with less than sixty members. There was a steady decline in the proportion of inbreeding in relation to the number of positions in different universities which members of the sample held. Sixteen percent of those who had held no previous positions were hired by their graduate departments, compared with 13 percent of those who had held one or two previous positions and 8 percent of those who had held more than two previous positions. The amount of inbreeding was highest in physics and psychology (16 and 18 percent, respectively) and lowest in chemistry and economics (8 and 9 percent, respectively).

[10] The majority of graduates of the leading departments are hired by departments outside this group. Brown reports that 84 percent of the graduates of the top twenty-eight uni-

be hired at any level of this group of twenty, rather than at a level adjacent to that of their graduate department. The top five departments were as likely to hire a graduate from departments with ranks sixteen to twenty as were departments with ranks sixteen to twenty. There was no difference in this respect between faculty who had held previous positions and those who had not, between faculty at different professorial ranks, or between faculty in different disciplines. Using data indicating the amount of social mobility in Britain and Denmark, Goodman (1965) has demonstrated a similar phenomenon. Sons tended to "inherit" their fathers' class positions, but, among those who did not, there was no relationship between class of origin and class of occupation. This may be a general characteristic of stratification systems.

It appeared that, among all ranks of the leading departments, high-prestige doctorates were preferred. A number of additional variables, such as previous employment, performance, rewards, and discipline, were examined in order to see if they affected this relationship. As table 3 indicates, the proportion hired from schools with the highest ranks (excluding faculty hired by the schools which trained them) remained almost unchanged, regardless of the nature of the subgroup examined. Neither previous experience at high-ranking schools nor performance as reflected in productivity, citations, and recognition had noticeable effects. Since none of these variables is correlated either with prestige of doctorate or with rank of current affiliation,[11] prestige based upon doctoral origin would seem to be the best predictor of an individual's likelihood of being hired by one of the top twenty departments.[12] The fact that those selected are so similar on

versities moved to institutions which were below this group in prestige (Brown 1967, p. 100).

[11] All these correlations are very low. The same correlations for each discipline separately are also low. The correlation coefficients are as follows:

	Rank of Doctorate	Rank of Current Affiliation	*N*
Rank of previous academic affiliation	121	114	667
Number of publications	−.065	− 051	347
Number of citations	− 089	− 001	408
Number of honors	− 066	− 062	407

The correlations were computed using ungrouped data. Multiple regressions were performed relating each performance variable and doctoral origin to current academic affiliation. These regressions were run separately for each discipline and with the various disciplines combined. The cumulative percentage of variance explained was less than 3 percent for thirteen regressions and less than 6 percent for two regressions. In samples which include faculty hired by schools below the top twenty, these variables are correlated (Cartter 1966, chap. 4; Cole and Cole 1967; Crane 1965).

[12] For an analogous argument that data showing low correlations can be empirically meaningful, see Cole 1968, pp. 63–64.

TABLE 3

PROPORTION HIRED WITH DOCTORATES FROM HIGHEST RANKING DEPARTMENTS BY SELECTED VARIABLES

Proportion Hired with Doctorates from:	All Faculty	All Faculty Excluding "Inbred"	All Faculty Having Held Previous Positions*	Faculty Having Held Previous Positions in Top 10 Depts.*	All Faculty Not Having Held Previous Positions*	Faculty with More Than 5 Publications*, †	Faculty Whose Publications Have Been Cited*, ‡	Faculty with Recognition*, §
Top 10 departments	58	56	57	66	59	58	56	65
Top 5 departments	38	37	36	38	41	34	35	40
N.	780	676	394	172	225	136	231	111

* Excludes faculty hired by department of graduate training.
† Includes English, economics, physics.
‡ Includes chemistry, physics, psychology.
§ Includes chemistry, English, physics, philosophy.

the performance variables helps to explain the absence of a relationship between prestige of doctorate and prestige of current affiliation within the system. It is as if the candidates were interchangeable and could be placed at any rank among the top twenty departments.

There was some evidence that, at later stages of the academic career, the use of doctoral origin as a predictor of future performance tends to diminish. Table 4 shows that, among those who had held more than one previous position, the proportion hired from the top ten and the top five departments was reduced by a few percentage points in most of the subgroups examined.

Since standards for evaluating research are believed to be more objective

TABLE 4

PROPORTION HIRED WITH DOCTORATES FROM HIGHEST RANKING DEPARTMENTS BY SELECTED VARIABLES AMONG THOSE HAVING HELD MORE THAN ONE PREVIOUS POSITION

Proportion Hired with Doctorates from:	All Faculty Having Held More Than One Previous Position	Excluding "Inbred"	Previous Positions in Top 10 Departments*	More Than 5 Publications*,†	Publications Have been Cited*,‡	Recognition Received*,§
Top 10 departments	51	50	51	56	51	58
Top 5 departments	34	34	31	37	33	38
N	219	193	59	67	98	56

* Excludes faculty hired by department of graduate training.
† Includes English, economics, physics
‡ Includes chemistry, physics, psychology.
§ Includes chemistry, English, physics, philosophy.

in the natural sciences than in the social sciences and in the humanities, one might expect to find differences by discipline with respect to patterns of mobility (Hagstrom 1965). In other words, the prestige of the doctorate rather than the quality of the applicant might be expected to have more influence upon mobility in the social sciences and in the humanities. Actually, differences were greater within than across these subject areas. Departments were rated from one to five by Cartter's respondents. Depending upon the average rating which a department received, it could be classified as "distinguished," "strong," "good," "adequate plus," or "other."[13] The percentage of surveyed departments falling into each of these categories varied in different disciplines. The proportion of respondents hired from departments with ranks six to ten was related to the

[13] Departments receiving average ratings of 4.01 to 5.00 were considered "distinguished," those with ratings of 3.01 to 4.00 "strong," those with ratings of 2.51 to 3.00 "good," and those with ratings of 2.00 and 2.50 "adequate plus."

proportion of departments receiving distinguished ratings. For example, in disciplines such as economics and physics in which seven and nine departments, respectively, received distinguished ratings, a higher proportion of faculty were hired from schools ranked six to ten (see table 5). Similarly, in disciplines in which high percentages of departments surveyed were placed in the "good" and "adequate plus" categories, higher percentages of faculty from departments below the top twenty were hired by the top twenty departments.[14] This was the case in chemistry, English, and psychology—fields which fall in different subject areas—suggesting that the subject area itself is not the independent variable.

TABLE 5

RANK OF GRADUATE SCHOOL BY DISCIPLINE AMONG FACULTY HIRED BY TWENTY LEADING DEPARTMENTS IN SIX DISCIPLINES, 1963–66, EXCLUDING FACULTY HIRED BY DEPARTMENT OF GRADUATE TRAINING*

	Rank of Graduate School				All Other American Universities	Foreign Universities	No Ph D.	Total	N
Discipline	1–5	6–10	11–15	16–20					
Chemistry . .	36	16	12	8	14	12	3	101	118
Economics . .	49	20	13	4	7	4	4	101	111
English .	29	20	21	11	17	1	1	100	95
Philosophy	45	17	2	8	8	17	4	101	53
Physics .	29	29	7	4	12	19	0	100	141
Psychology	38	13	9	13	21	5	1	100	149
Total . .	37	19	11	8	14	9	2	100	667

* Excludes those for whom rank of graduate school was not available.

CONCLUSION

It appears that prestige of doctorate has more influence than scholarly performance upon selection for a position in a leading academic department. Given the nature of the data, we can only speculate about the factors which underlie these findings. It could be argued that, despite the system's normative commitment to universalistic criteria, they are not utilized in practice. At the time of selection for a position in one of the leading departments, those with the most prestigious doctorates have not yet demonstrated superior capability, according to the indicators used here.

[14] The correlation between the number of departments in the distinguished category and the percentage of faculty hired in each discipline with doctorates from departments with ranks six through ten was .715. The correlation between the percentage of departments in the "good" and "adequate plus" categories and the percentage of faculty hired from all universities below the top twenty was .874. The correlation between the percentage of departments in the "all other" category and this same percentage was −.655. (Faculty hired by the department which had trained them were excluded from all three of these correlations.)

It is possible that superior training of those with doctorates from distinguished departments may enhance their capabilities for productivity later. However, Hagstrom (1968) has shown that, for four natural science disciplines, there were no differences in productivity among faculty located at various levels of the leading twenty departments.[15] Cole (1968), on the other hand, has shown that faculty located at distinguished departments are more likely to be cited than those located at strong departments.[16]

These findings can be interpreted by viewing academic stratification systems as organizational sets (Caplow 1964): two or more organizations of the same type, each of which is continuously visible to every other, and continually comparing its own with others' performances on relevant criteria. Any organizational set has a small group of leaders (in this case, Cartter's distinguished departments), a small group of second-rank but solidly established competitors (Cartter's strong departments), and a large subset whose members are considered marginal and of progressively poorer quality. The higher a given organization's prestige, the more influence it has upon the standards of achievement in the set as a whole and the greater its ability to exemplify those standards. That publications by members of distinguished departments are more often cited by scientists located at all levels of the system (Cole 1968) is to be expected, since these organizations are setting the standards of performance for the system as a whole.

Gaston (1969), who studied high-energy physicists located at twenty British universities (which roughly correspond to the leading universities in this country), found no relationship between either prestige of university affiliation or prestige of doctorate and scholarly performance (productivity and recognition). However, 57 percent of the physicists located in these universities had obtained doctorates from the three leading universities. These graduates formed a substantial proportion of the faculty at all prestige levels of the system.[17]

Academic stratification systems in different countries vary considerably in terms of the number of elite units and other units, and in the steepness of the hierarchy of the set. It has been hypothesized that the larger the number of elite units in the system, the more competition occurs between these units, which in turn raises the quality of scientific output in the system

[15] Knudsen and Vaughan (1969, p. 17) found that, for sociology, only two of the five departments with the highest numbers of publications per Ph.D. awarded were rated among the top five by Cartter's respondents.

[16] The absence of a similar correlation in the data being presented here may be due to the relative youth of the sample. The *Science Citation Index* probably underestimates level of citation for younger authors, since only senior authors are listed and younger men are more likely to be junior authors.

[17] Personal communication to the author, June 23, 1969.

(Ben-David and Zloczower 1962). For example, in some European countries, the number of elite universities has been small, and they have not had to compete with one another for human and economic resources. There is some indication that increasing the number of universities with a high level of resources for research would increase the amount of competition and hence the quality of scientific work in certain European countries (Ben-David 1968).

While the number of elite universities in the United States is larger than has been the case in most European countries, it is not clear whether the size of the American university elite has increased sufficiently in relation to the population and resources of the country. In recent years, resources have increasingly been shared with universities outside the elite, with a concomitant increase in the scientific and scholarly productivity of these institutions. Cole (1968) has suggested that the research performed by these institutions does not contribute significantly to the growth of scientific knowledge, since this work is much less likely to be cited than the work produced in distinguished departments. Price (1967) has shown that, in terms of quantity of research, the United States produces about what would be expected in terms of its economic resources.

However, for several decades, there has been little change in the composition of the highest ranking members of the elite universities (Berelson 1960, p. 98). Merton (1968) has argued that rewards have a cumulative effect, increasing the scientist's ability to obtain resources for producing scientific work and thus the probability of successful performance in the future. The same process could apply with respect to organizations. The dominance of these organizations in the system as a whole is indicated by the priority given to their graduates in hiring. Whether the American university elite would be more innovative if it were broadened to include more universities is a question toward which further research should be directed.

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Encountering the Male Establishment: Sex-Status Limits on Women's Careers in the Professions[1]

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Despite impressive extensions in the scope of women's social and political rights, there have been few extensions of sex-linked boundaries in the prestigious, male-dominated professions. This paper identifies the processes and structure of the professions in the United States which act to limit women's participation and achievement within them. Because their sex status is defined within the culture of professions as inappropriate, women find that the institutionalized channels of recruitment and advancement, such as the protégé system, are not available to them. Various modes of behavior on the part of women and their colleagues are described which are consequences of women's minority position and which reinforce it. Social changes affecting the traditional structures and opening careers in the professional hierarchy are discussed.

During the past half-century women have entered many upper-level occupations and positions from which they were once excluded, and their general level of involvement in the labor force has risen. But their participation in the occupations of highest rank—among them the professions of law, medicine, teaching in higher education, and the sciences—has not kept pace with these developments nor has their access to the elite levels of the professions been greatly improved. Further, despite pressures to implement the equalitarian values in American culture and impressive extensions of women's social and political rights, there have been no accompanying extensions of the sex-linked boundaries existing in the occupations of high prestige in this society.

The processes which undermine women's motivations for professional careers and work against their completion of the necessary education,

[1] This is publication A-575 of the Bureau of Applied Social Research, Columbia University. Permission has been granted by the University of California Press to publish a revised version of sections of *Woman's Place: Options and Limits in Professional Careers*, issued in April 1970. The paper is based on research performed for a study of women lawyers in the New York City area in 1966–67. It was prepared with the support of NIMH grant no. F1 MH-22, 158-03 and grant no. 91-34-68-26 from the Manpower Administration, U.S. Department of Labor. It is a revised version of a paper delivered at the 1967 annual meetings of the American Sociological Association, San Francisco, California. The author is indebted to Howard M. Epstein and William J. Goode for critical assistance and to Robert K. Merton for his extensive comments on an earlier version. Harriet Zuckerman also offered valuable suggestions.

their entry into practice after training, and their aiming at the highest levels of performance in professional practice have been described in various works. (Rossi 1965; Bernard 1964; Friedan 1963; Komarovsky 1953; Epstein 1970). Here I wish to focus on one set of these processes; those anchored in the structures of the professions and having the consequence of causing women's sex status to become salient[2] in the professional role, equal to or above the occupational status. We will also draw attention to the consequences of "sex-typing"[3] and of "status-set typing"[4] in the professions which have made the professions almost exclusively male. The important processes which underlie these questions are: (1) the colleague system of the professions, especially at the upper levels; (2) the sponsor-protégé relationship, which determines access to the highest levels of most levels of most professions; (3) the demands of the specific professions' "inner" structure and its attendant patterns of social interaction which are, under most circumstances, *incompatible* with the sex-role expectation repertory of even those women engaged in professional careers; and (4) the sex-typing of occupations, which reinforces these processes in linking occupational roles and sex roles.

This analysis applies not alone to women, but to others who possess statuses (such as age or race) which are culturally defined as "inappropriate" when held in conjunction with certain occupational statuses. That is, those persons whose status-sets do not conform to the expected and preferred configuration cause discordant impressions on members of the occupational network and the society at large: the black physician, the Jewish Wall Street lawyer, and the football-hero philosophy professor all generate such discordance.

SEX-TYPING OF OCCUPATIONS

One element of "status-set typing" is the sex-typing of occupations. The typing of certain occupations as male or female has consequences for entry to them and performance within them by persons who possess the

[2] Part of the analysis which follows draws on Robert K. Merton's conceptualization of the dynamics of status-sets, presented in lectures at Columbia University over the past years, but as yet unpublished. According to Merton, the "salient" status is the one that is focused upon—made salient—in the interaction under analysis. The salient status may be the one that is most germane to the interaction but it may be one that is inappropriate to the situation. The black teacher who is invited to join a faculty because he is black, not because his professional status merits the offer, has had his racial status made salient.

[3] According to Merton, "occupations can be described as 'sex-typed' when a very large majority of those in them are of one sex and when there is an associated normative expectation that this is as it should be."

[4] Thus I have labeled it "status-set typing" when a class of persons who share a key status (e.g., lawyer) also share other matching statuses (e.g., white, Protestant) and when it is considered appropriate that this be so.

"wrong sex." Those occupations defined as male provide a social context uncomfortable for women. Those who seek entry to them are regarded as deviants and are subjected to social sanctions. As a result, few women attempt to enter such fields, and those who do often are blocked from the opportunity structure.[5]

As table 1 shows, women lawyers have increased from 1 percent of the profession in 1910 to 3.5 percent in 1950, but there has been no change in this percentage for the past ten years. Women now form 6.8 percent of the medical profession, an all-time high, but not a striking increase over the 6.1 percent of ten years before or since 1910, when women constituted 6 percent of the profession. The percentage of women college teachers has gone down steadily since 1930 from 32 percent to 19 percent today. Although the U.S. census figures are now almost ten years old, and there are certain indicators of increasing participation by women in some fields such as law,[6] it is doubtful that a really new trend is emerging.

TABLE 1

WOMEN AS PERCENTAGE OF ALL WORKERS IN SELECTED PROFESSIONAL OCCUPATIONS (USA, 1900–1960)

Occupation	1960	1950	1940	1930	1920	1910	1900
College professors, president, instruction	19.0	23.0	27.0	32.0	30.0	19.0	...
Doctors	6.8	6.1	4.6	4.0	5.0	6.0	...
Lawyers[a]	3.5	3.5	2.4	2.1	1.4	1.0	...
Engineers	0.8	1.2	0.3	...	...	...	...
Dentists	2.1	2.7	1.5	1.8	3.2	3.1	...
Scientists	9.9	11.4	...	...	...	...	...
Biologists	28.0	27.0	...	...	...	...	...
Chemists	8.6	10.0	...	...	...	...	...
Mathematicians	26.4	38.0	...	...	...	...	...
Physicists	4.2	6.5	...	...	...	...	...
Nurses	97.0	98.0	98.0	98.0	96.0	93.0	94.0
Social workers	57.0	66.0	67.0	68.0	62.0	52.0	...
Librarians	85.0	89.0	89.0	91.0	88.0	79.0	
Clergy	5.8	8.5	2.2	4.3	2.6	1.0	4.4

SOURCE.—U.S. Bureau of the Census of 1963, vol. 1, table 202, pp. 528–33. 1900–50 statistics from U.S. Department of Labor 1954, p. 57.

[a] The lack of change in the percentage of women lawyers is even more striking if one uses the adjusted figures of Hankin and Krohnke (1965)

1963	1960	1957	1954	1951	1948
2.7	2.6	2.7	2.3	2.5	1.8

[5] In fields which are not sex-typed or have not yet become sex-typed, or where there are few expectations concerning what would constitute an appropriate status-set to complement the occupational status, opportunities for women are great. As far as I know, computer programming is an occupation which has not become typed and many bright women and minority group members have been drawn to the field.

[6] The enrollment of women in some law schools has increased in recent years. The University of Notre Dame Law School admitted women for the first time in the fall of 1969. The 20 women comprised 12 percent of the entering class, an unusually high proportion for law school classes (*New York Times*, September 14, 1969).

Some occupations which have remained predominantly male in the United States are, in other countries (most notably the Communist-bloc nations), regarded as female occupations. In the Soviet Union, women constitute 75 percent of the medical profession, 30–40 percent of the judges, and 28 percent of the engineers; in Denmark, they make up 70 percent of the dental profession.

Yet even in these countries women's share of the leading positions in the professions is meager. While social definitions regarding the "proper" sex of a practitioner are important in determining the sex-composition of an occupation, the sex-ranking of occupations provides an added inhibitor of women's advancement. High-ranking occupations in all societies are typically male (Goode 1964, p. 70). Medicine does not rank low in the Soviet Union, but it does not rank nearly as high as in the United States. For all occupations in all societies, as one approaches the top, the proportion of men increases and the proportion of women decreases. In the Soviet Union, for example, only the tiniest proportion of professors of surgery within the great teaching universities and research institutes are women (Dodge 1966); in the United States, although women constitute close to 20 percent of the academic ranks of higher education, few women attain the rank of full professor in the institutions of highest prestige.

It is evident that the dynamics of recruitment and involvement at the higher echelons of professions are different than they are at the lower levels and that they militate against the participation of women. Further, these processes are integral to the "culture" of the professions as we know them and may not be intentionally exclusionary. Of course, cultural attitudes tied to women's roles and women's biologically linked characteristics interweave with these processes in making the woman professional's sex-status salient in the course of her career.

CHARACTERISTICS OF PROFESSIONS

Professions share many characteristics of communities (Goode 1957; Merton, Reader, and Kendall 1957). They tend toward homogeneity and are characterized by shared norms and attitudes. The work of the professions depends greatly on mutual understanding between practitioners and common standards of behavior which permit them control of their share without much intervention from the state or lay public.

Interaction in professions, especially in their top echelons, is characterized by a high degree of informality, much of it within an exclusive, club-like context. As Hughes (1962) describes these qualities, professionalism "indicates a strong solidarity of those in an occupation. . . . The very word 'profession' implies a certain social and moral solidarity, a strong dependence of one colleague upon the opinions and judgments of others" (Hughes 1962, pp. 124–25).

Thus, it is difficult for someone not equipped with a status-set of appropriate statuses to enter the exclusive society, to participate in its informal interactions, to understand the unstated norms,[7] and to be included in the casual exchanges.

The Protégé System

Entry to the upper echelons of many professions is commonly gained through the protégé system. This system, linked to the colleague system, operates both to train personnel for certain specialties (special areas of surgery or corporate law, for example), and to assure continuity of leadership. These fields are marked by the interplay between the formal and informal relationships of the practitioners. At certain levels one must be "in" to learn the job. Becker and Strauss (1956) point out that "until a newcomer is accepted [in these fields] he will not be taught crucial trade secrets," much less advance in the field.[8]

The sponsor-protégé (or master-apprentice) relationship may inhibit feminine advancement. The sponsor is apt to be a man and will tend to have mixed feelings about accepting a woman as protégé. Although the professional man might not object to a female assistant—and might even prefer her—he cannot easily identify her (as he might a male assistant) as someone who will eventually be his successor. He may therefore prefer a male candidate to a female in the belief that she has less commitment to the profession. When the woman is accepted as a protégé, her other role-partners—husband, father, child, etc.—may be jealous and suspicious of her loyalty to the sponsor and her dependence on him. The sponsor's wife may also resent the intimacy of the relationship between the sponsor and his female protégé and object to it.[9]

If the sponsor wants to minimize his risks in adopting recruits, the collegial group will not favor an unsuitable member likely to weaken its intimacy and solidarity and it may exert pressure on the sponsor to pick the protégé with whom it will be comfortable (see Etzioni 1961, p. 260).

For a sponsor, a protégé (1) eases the transition to retirement (Hall 1948; Hughes 1945); (2) gives him a sense of continuity of his work, and (3) gives some assurance that his intellectual offspring will build on his work It is considered unwise to depend on a woman for these.

[7] Goffman (1963, p. 129) points out that "more is involved than norms regarding somewhat static status attributes . . . that failure to sustain the many minor norms important in the etiquette of face-to-face communication can have a very pervasive effect upon the defaulter's acceptability in social situations."

[8] The work of Hall (1948) illustrates this for medicine. See also Smigel (1964, pp. 100–102).

[9] A number of placement officers in law schools report that it is difficult to place female graduates with solo practitioners. The reason offered, evidently considered as legitimate, is that the men complain that their wives would object.

Even if she serves an apprenticeship, the female professional may not get the sponsor's support in gaining entry to the inner circles of the profession—support which a male neophyte would expect as a matter of course. The sponsor may exert less effort in promoting a female student for career-line jobs. First, he may believe that she is financially less dependent on a career position than a man might be.[10] Second, because of her presumably highly contingent commitment and drive (she might forego all for marriage, after all), he might only reluctantly introduce her or recommend her to colleagues.

However, it is often true that a protégé relationship may be more important to the woman than a man, and that a male sponsor may make an extra effort to promote a female protégé because he is aware of the difficulties she faces. In fact, she may only be able to rise or gain notice in a field because she is a protégé, although this form of entry is not as important for others. I have suggested elsewhere (Epstein, in press) that women in professional life seem to find jobs and feel most comfortable in situations which are highly particularistic and are considered a unique exception to the general rule excluding women (e.g., because a particular woman is brilliant, or is in partnership with her husband), or in highly bureaucratized situations, such as government service, where strictly universalistic criteria, such as standing on competitive examinations, are applied. In fact, as table 2 shows, women professionals go into government service in far

TABLE 2

PERCENTAGE OF PROFESSIONAL WORKERS IN SELECTED OCCUPATIONS IN GOVERNMENT SERVICE BY SEX (1960)

Occupation	Male	Female
Dentists .	0 03	10 0
Lawyers.	14 0	27 0
Doctors.	14 0	30.0
Engineers .	17 0	32.0

SOURCE.—U.S. Bureau of the Census 1963, p. 277.

[10] A dramatic example of this is the Ruth Benedict-Franz Boas relationship in the Columbia University Anthropology Department. Boas regarded Ruth Benedict, as the wife of Stanley Benedict, "amply supported and with the obligation of a wife, someone for whose talents he must find work and a little money, someone on whom he could not make extreme demands and for whom he need not be responsible" (Mead 1959, pp. 342–43). Later, when Ruth Benedict separated from her husband and pressed for professional standing, Boas got her an assistant professorship. (The illustration is cited in Bernard [1964, pp. 105–6].)

greater proportions to their number than do men. In this respect, they are much like other minority groups, such as Negroes.[11]

This pattern tends to be self-perpetuating. Women tend to select these two kinds of work situations because they know they will meet least opposition. Placement offices in professional schools often fit women students to government work and counsel them to avoid high-prestige firms or research centers. This means that many women never even enter environments where contacts are made for protégé relationships essential to entering the elite corps of their professions. Even within these environments, it is often true that women are guided into peripheral or low-ranking specialties where their work is not likely to draw the elite's attention.[12]

Later progress in a woman's career may be inhibited by similarly limited access to fellow practitioners and peers and their clubs and associations—the circle in which job opportunities are made known and informal recommendations are made. Hall (1948) illustrates the interdependence of career advancement and sponsorship by specifying the channels through which younger doctors of proper class and acceptable ethnic origins are absorbed into the inner fraternity of the medical profession. He notes that perpetuation of this fraternity depends on a steady flow of suitable recruits.

Performance Criteria

The collegial relationship is also important in the assessment of the performance of professionals. Although adequacy of performance may be simple to judge at lower levels of a profession, the fine distinctions between good and superior performance require subtle judgments. Members of professions affirm that only peers can adequately judge performance at these levels (as opposed to the lay public or outside agencies); they know the standards, they know the men, and they can maintain control. And the professions typically close ranks to maintain control when their autonomy is threatened. At higher levels, high stakes are often involved: legal decisions can affect people's lives or huge sums of money; medical decisions can assure a patient's life or death. Although there are gross guidelines for the behavior of professionals at these levels, formal scrutiny is minimal and the social controls exercised by peers act most effectively

[11] A larger proportion of nonwhites than whites are employed by the government in practically every occupational category in the professional and technical group in the census. For example, 20.1 percent of Negro lawyers and judges go into government work as contrasted with 14 percent of whites; 24.7 percent of Negro physicians contrasted with 14.8 percent of whites (U.S. Bureau of the Census 1963, p. 284).

[12] A disproportionate number of women lawyers specialize in the low-ranking speciality of matrimonial law and a disproportionate percentage of women doctors practice psychiatry, a relatively low-ranking medical specialty. For a further analysis see Epstein (1970, chap. 4).

to prevent deviance. The professions depend on intense socialization of their members, much of it by immersion in the norms of professional culture even before entry; and later by the professional's sensitivity to his peers. These controls depend on a strong network cemented by bonds of common background, continual association, and affinity of interests.

Not only do contacts with professional colleagues act as a control system, they also provide the wherewithal by which the professional may become equipped to meet the highest standards of professional behavior. As we know, the learning of a profession is not completed with graduation from the professional school. Techniques and experience must still be acquired in interaction with established practitioners. This is true also for acquiring new knowledge.[13]

Evidence suggests that women professionals are not involved in the collegial networks to the extent that men are.[14] Thus they are excluded from the situations in which they can learn and are also excluded from the social control system which lets them know how well they perform (Epstein 1969)

The judgment of whether a professional is "top" rank is contingent on a number of elements linked to the collegial system:

Contributions.—Definitions of "contributions" vary from field to field but each profession has norms regarding quality and quantity of contributions deemed adequate for consideration as high-level performance. Women probably do make proportionately fewer contributions to their professions than do men (in male-dominated professions) although there is some evidence to the contrary (Simon, Clark, and Galway 1967). Few women have achieved fame for discoveries in science, designing great architectural structures, devising new surgical techniques, or the triumphant argument of cases before the Supreme Court. If publication in the academic professions is used as a criterion, it is probably true that women are responsible for proportionately fewer books and articles considered important to their fields. Even if one does not use standards of "greatness," it is not commonly believed that women do very much publishing at all.[15] The colleague and

Sir Alfred Egerton has noted, in fast-moving sciences, "of the total information extant, nly part is in the literature. Much of it is stored in the many brains of scientists and echnologists. We are as dependent on biological storage as on mechanical or library orage." It is to this source of unpublished information that access may be more limited r women than for men (cited by Bernard 1964, p. 303).

Bernard's (1964, p. 152) study of women zoologists showed that women faculty embers at colleges had less contact with fellow scientists than did the men there. They ere less likely than other scientists to attend meetings of professional societies. They ere also less likely than male scientists to be on regular mailing lists for reprints of searchers. Women on the staffs of universities seemed to do better in becoming part the communications network.

For a review of some surveys on women's productivity see Epstein (1970, p. 171)

network systems are probably important in assessing these "facts." These are some of the dynamics involved:

a) Contributions must be visible to be noted; work from the larger and more prestigious institutions probably has a greater chance of being noticed than work performed at lesser-known institutions.[16] Women are less likely to be affiliated with large and prestigious institutions.[17]

b) Contributions are also made visible by the activity of senior men in the field to promote them or by joint publications with those in eminent positions.[18] I tentatively suppose that women's contributions are not promoted as much as men's and that they less often collaborate with those in eminent positions.

On the other hand, women professionals in male-dominated professions have greater visibility than men simply because they are a small minority. At professional meetings they are physically more visible (as are Negroes), and their written work identifies their sex by name. When their work is good, it may get even greater notice than that of men who perform at the same level of competence.

Performance.—Not only are written or material works assessed in considering a person for a place at the top, but also the quality of his general performance. Colleagues "get to know" a man by their exposure to his work in the courtroom, at the operating table, in the laboratory. Performances bearing the labels of well-known institutions are more apt to attract public notice; further, the great men who will make the judgments are at the great institutions and are likely to be in a better position to judge the potential of the young who are already in their midst.

The relative invisibility of the woman professional's performance stems directly from women's disadvantageous position in the structure of the professions. They are not only routed into less visible positions, such as library research, but the specialities in which they predominate are typically regarded as the less important and less demanding ones, and their skills in them count for less.

Incomes are lower in the professional specialties in which women pre-

[16] This is an example of the "halo" effect of the institution on the author of a piece of work where his identity is not commonly known. Cole and Cole (1968) have found that the visibility of physicists, for example, is highly correlated with the rank of department in which they work.

[17] In 1963, 82 percent of women faculty members, contrasted with 74 percent of the men, worked in colleges and technical institutions with a faculty numbering under 200; 18 percent of the women as contrasted with 26 percent of the men teaching in colleges were in institutions with more than 200 faculty.

Women faculty members were also affiliated with smaller universities to a greater extent than were men (Dunham, Wright, and Chandler 1966, pp. 64–65).

[18] Zuckerman (1967, p. 393) finds, for example, that Nobel laureates who themselves had laureate "masters" received the prize, on the average, nine years earlier than scientists who had not studied with a prize winner.

dominate. Women lawyers in a relatively unlucrative field, such as matrimonial law, are less apt to gain distinction and advance in a firm because they are unable to contribute substantially to the firm's total profits. Women are also seldom given the accounts of important clients; their comparatively unimportant clients cannot effectively press for their promotion.[19]

Women also tend less than men to be in positions where they can exercise the greatest autonomy. Figure 1 indicates that women who work in the male-dominated professions are self-employed to a far lesser degree than are men. They are also less likely to be in high-ranking, decision-making positions if they are on the staffs of institutions, or in professional or business firms.

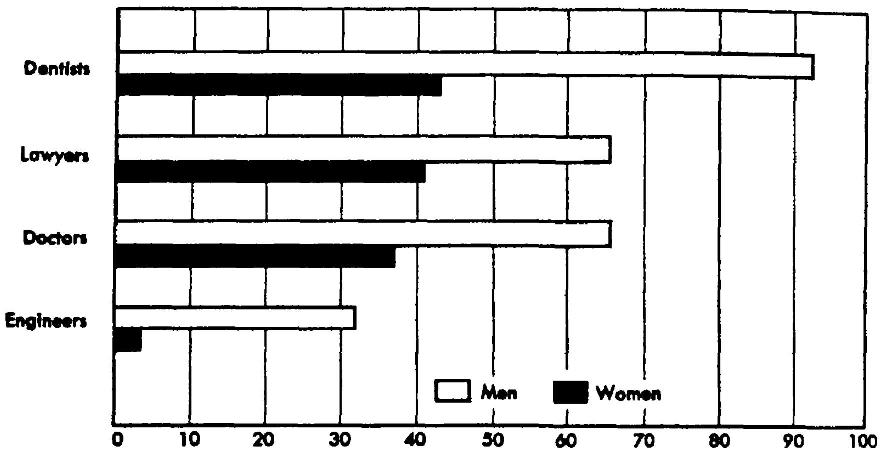


FIG. 1.—Proportion of males and females in selected professions who are self-employed
Source: U.S. Bureau of the Census 1963, table 21, p. 277.

Associations.—Membership and participation in professional associations characterizes the active professional and reinforces his ties to colleagues and work. At professional meetings information is traded about new techniques and theories, and informal judgments are exchanged about the profession's rising "stars." Professional friendships develop into personal relationships at the cocktail hours, and at committee and dinner meetings. The appointment of members to special committees may publicize their achievements to their colleagues.

Women are less active in professional organizations than are men, particularly at the decision-making levels. It is generally believed, but not generally proven, that proportionately fewer women than men join professional organizations (see Fava 1960, pp. 171–72; Bernard 1964, p. 152;

[19] See Smigel's evaluation of client sponsorship as a path to partnership in a large firm (1964, pp. 100–102).

Simon et al. 1967, p. 234; Epstein 1970, p. 185 ff.). Certainly, however, women's past participation and performance in professional organizations has been limited.

Women's reticence to participate in these associations is due in part to past discrimination against women in some cases in the recent past, although no professional organization today excludes women from membership. In cases where there were no legal barriers based on sex (or where they were removed), women were nevertheless made to feel unwelcome. Women have been barred particularly from full participation at decision-making levels. They are seldom elected to prestigious committees or to executive posts. In the field of sociology, out of a total of 57 presidents, only one woman has been elected to serve as president of the American Sociological Association. In the American Psychological Association too, they have been continuously underrepresented in posts of distinction.[20] In law, they tend to serve disproportionately on bar association committees concerned with family law[21] (reflecting their high representation in the specialties of matrimonial law, custody, adoption, etc.) and not on the committees of high rank.

To some extent the establishment of women's professional organizations has served to deflect women's participation in the general professional groups. Some women's organizations were formed because the general organizations had formal or informal bans on female membership.[22] Following the removal of these barriers, they have generally managed to keep their inner sanctums free of women.[23]

[20] Mitchell (1951, p. 200) reported that women had not become fellows, officers, committee chairmen, committee members, editors, representatives to other organizations, members of the Council of Representatives, members-at-large, on the Executive Committee, or division presidents of the American Psychological Association in proportion to their numbers and qualifications. Only as secretaries have they served in proportion to their numbers. In 1968 no women held major offices.

[21] For example, in a listing of the principal committees and members of the New York County Lawyers' Association for 1967–68, women served on fourteen of thirty-seven committees, and some appeared on more than one (*New York Times*, August 6, 1967, p. 37). Of a total of 1,103 members of the State Bar of California serving on committees, only eighteen are women (letter from Karl E. Zellman, Assistant Secretary, State Bar of California, March 21, 1967).

[22] For example, the National Council of Women Psychologists was established in 1942, after it became clear that the Emergency Committee in Psychology of the National Research Council was continuing to omit women from its plans for the wartime use of psychologists (Mitchell 1951, p. 193). The National Association of Women Lawyers and other women's bar associations were also formed in response to exclusion by the men. There are also separate professional associations for women in the fields of medicine (founded 1915), dentistry (founded 1921), engineering (founded 1950), geography (founded 1925), and certified public accounting (founded 1933). It is interesting to note that in professions typed as female, there are no separate men's organizations, nor have men been legally excluded from membership at any time.

[23] New York attorney Doris Sassower, former president of the New York Women's Bar Association, tells of the experience of Florence Allen, Chief Judge of the U.S. Court

Male clubs which recruit members cross-occupationally and which are also centers of informal contacts between those at the top, by their very definition exclude women. Prestigious clubs, such as the Harvard and Princeton Clubs, permit women entry only on ludicrously limited bases, and their resistance to full integration is dramatized to the women by certain symbolic devices; among them are separate women's entrances and restaurants limited to male patronage during lunch hours. Of course, there is no shortage of places for male and female colleagues to lunch together but many men seem to favor the club setting, and when women go along, they must use "the back entrance" (the Harvard Club), if they are admitted at all.

Dedication to the profession.—The ideal professional is one whose work dominates the other parts of his life. As his professional associations blend into personal friendships, so his working and leisure hours may merge. Although styles of work differ, the professional's involvement with his craft is generally expressed by the long hours he puts in. Because women professionals do not or cannot work the same number of hours as their male colleagues (table 3), their commitment is suspect and they are not deemed colleagues in the full sense of the word.

Exclusivity of the elite.—The collegial system has the further consequence of creating an image of exclusivity which reinforces professional boundaries. Even if inner circles do not act to explicitly exclude "inappropriate" members, outsiders are loath to place themselves in a situation which they anticipate would be embarrassing or uncomfortable. Women, as members of an inappropriate category often practice self-exclusion and limit their professional interactions. Although they might or might not be rebuffed if they initiated contact, the situation is often never put to the test.[24] The woman's self-imposed limits on professional interaction often complete the self-fulfilling prophecy of her ineptitude. To a large extent, this behavior results in her acceptance of the prevailing image of professions as societies of men.

Women often not only exclude themselves, but favor exclusion of other women. They accept the image and definitions of this behavior as ap-

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of Appeals, Sixth Circuit, who, when appointed as a federal judge, found the resistance of fellow judges so great that they refused to look at her or speak to her, except when forced to by the business at hand (speech delivered at the Waldorf Astoria Hotel, May 13, 1967, on the occasion of the first Florence E. Allen Award).

24 Some of the women lawyers I interviewed, for example, avoided joining colleagues at lunch. One commented, "Sometimes when the natural thing to do would be to join an associate and a client at lunch if you were a man, you feel, well, maybe I'd better not. It might be awkward for them. They might want to talk about something and might feel constrained."

propriate. The more informal the professional context, the more willing women seem to concede the "rightness" of their exclusion.[25]

THE INTERACTIONAL SETTING

Because women don't "fit" well in the professional structure just described, their appearance in the collegial networks as legitimate coprofessionals often causes a considerable amount of role-confusion. Male colleagues typically are unable to engage in the normal collegial relationship with

TABLE 3

WEEKLY HOURS WORKED BY EMPLOYED ENGINEERS, SCIENTISTS, AND TECHNICIANS, BY SEX, 1960

Occupation	Mean No. Hours		No. Hours Worked (%)					
			Men			Women		
	Men	Women	1–34	35–40	41+	1–34	35–40	41+
Engineers	42.8	38.6	1	67	32	9	82	9
Scientists	42.1	38.6	5	68	27	11	75	14
Biologists	43.0	39.1	6	58	36	12	66	21
Chemists	41.6	38.8	4	72	24	9	80	11
Mathematicians	41.4	38.6	3	74	23	6	87	7
Physicists	41.6	*	5	72	23	18	59	23
Professors-instructors:								
Biological sciences	43.6	33.8	17	28	54	37	28	35
Chemistry	40.8	*	25	25	50	41	26	33
Engineering	42.5	*	15	32	53	60	20	20
Mathematics	36.4	35.4	34	30	36	37	31	32
Physics	40.5	*	26	26	48	54	...	46
Technicians:								
Medical and dental	42.2	38.5	10	51	39	15	61	24
Electrical and electronic	42.2	39.8	3	70	27	5	81	14
Other engineering and physical science technicians	41.5	38.7	4	71	25	8	80	12
Lawyers and judges	46.7	38.9	6	33	59	22	47	28

SOURCE.—U.S. Bureau of the Census 1963, table 13. Statistics (except for lawyers) cited in Rossi (1965).
* Mean not shown when the case base is less than 1,000.

them and instead fall back on the traditional norms governing male-female interaction.

Performance of the professional task may be seriously inhibited, when not only colleagues but clients focus on the sex-status instead of the occupational status of women. This occurs, for example, when a patient responds to a woman physician first as a woman and only second as a doctor, instead of as a doctor primarily and perhaps exclusively—the

25 A lawyer described her feelings in this way: "There was a camaraderie in the County (Law) Association—a terrific spirit. In other associations the members are very staid . . . but there everybody knows one another and they joke. They were prejudiced against admitting women but I think they were justified. It's not the same with a woman around. They aren't free to express themselves, to tell off-color stories—they should have that."

appropriate response in a professional relationship. This kind of social response colors both the attitude and behavior of the woman practitioner and forces her to work out ways to counter violations of the norms of professional relationships by her role partners. The following consequences may occur:

1. Women in professional life feel self-conscious[26] about being women, with the result that they are unsure of how they will be received.[27] They may overreact to conceal or inhibit "womanly attributes," and overconform or overproduce in an attempt to make up for their situationally downgraded status.[28] Women lawyers may, as noted earlier, try to be unobtrusive and not create "trouble" or attract attention by holding back in conversation or by accepting work which keeps them in "invisible" positions where they do not have individual clients.[29] They thereby accept and reinforce the common definitions about the inappropriateness of their presence in the field in which they have chosen to work.

2. Similarly the role partner—colleague, supervisor, client—may try to compensate[30] by being overly solicitous, congenial, courtly, underdemanding,[31] or overdemanding in the professional interaction.

3. Status discrepancies make continuous role definition necessary during interactions which should be routine. Thus, all group members are sensitized to problems of ambiguity and are forced to form new ground rules

[26] There is considerable congruence here between women professionals and other individuals who have some highly visible objectionable characteristic, trait, or status Like them, during contacts with "normals" the woman may feel that she is "on," having to be self-conscious and calculating about the impressions she is making, to a degree and in areas of conduct which she assumes others are not (Goffman 1963, pp. 13–14, 33).

[27] This problem is identified by Barker (1948, p. 34) in pointing to the uncertainty of status for the disabled person over a wide range of social interactions, including employment. "The blind, the ill, the deaf, the cripples, can never be sure what the attitude of a new acquaintance will be, whether it will be rejective or accepting, until the contact has been made. This is exactly the position of the adolescent, the light-skinned Negro, the second generation immigrant, the socially mobile person and the woman who has entered a predominantly masculine occupation."

[28] These two types of behavior are, of course, examples of "compulsive" behavior or overconformity (identified by Merton 1957, pp. 131–60), whereby adherence to norm prescriptions in spite of the situational context may weaken role relationships and in addition impede the accomplishment of the goal.

[29] White's data showed that women see fewer clients than do men (1967, p. 1093).

[30] Compensation may be a consequence of the discomfort persons feel in interaction with a stigmatized person, or, in our case, the person with a deviant status. Since he doesn't know how to act, because he feels sorry for the person with the stigma, or because he resents him for causing an awkwardness, the role partner tries to assuage his guilt by being extra-nice (Goffman 1963).

[31] As with the cripple, the woman professional's accomplishments are often judged by a different set of standards than the man's. Thus minor accomplishments may be assessed as signs of remarkable and noteworthy capacities "in the circumstances." This may well be interpreted as a "put down" on the part of whoever is judging the accomplishment.

(i.e., establish norms) for the situation. When the inappropriate status of the person's status set is activated in the professional context, refocusing of the interaction to the appropriate status must occur so that the professional task may be accomplished.

SITUATIONS WHERE FOCUSING ON SEX-STATUS WILL BE MINIMIZED

In view of the difficulties which are apt to be encountered by the woman professional in the course of her working life, I interviewed successful women professionals at length about the factors that had helped them in their careers. They described situations and patterns of professional life which helped to avoid or minimize the problems commonly faced by professional women. These were of the following types:

Formality in the professional context.—Where the working environment was formal and the tasks well defined, role partners were not unsure about the norms governing the interactions. For example, where authority patterns and the division of labor were clearly laid out, men would not feel disturbed by a woman giving instructions.

Defined standards of performance.—If there was no indecision about how to rate performance because the outcome could be measured and lead to a specific result, relationships with role partners were easier. For example, although it is difficult to evaluate the enduring quality of philosophical ideas, it is less difficult to evaluate the efficiency of a newly designed motor for a given piece of equipment. In cases where ability had been clearly demonstrated, other criteria for inclusion in the team become less important. Women in professional life counsel neophytes to make an effort to become experts in some speciality, because their special talents will then be sought out regardless of attitudes concerning women "in general."

Correlatively, where role partners in the professional encounter have a high stake in the task at hand and are dependent on each other for performance and information, women experience little difficulty. For example, an industrial engineer will show respect for the female patent lawyer who is charging him $60 an hour for consultation services, and she, in turn, is motivated to keep the relationship professional if she wishes to keep him as a client.

Flexibility of role-playing.—Where the woman wins acceptance of her sex status as natural and unobtrusive, she has fewer professional difficulties. Collegial relationships demand that role partners shift easily from formal roles to informal ones, from professional colleague to "one of the boys." Women must perform the functional equivalent of this flexibility in role-switching, but not imitate it. Women who act "professional" but not especially formal or aggressive, who try to be gracious as women and not to be one of the boys, are said to be able to make the best impression

on men and gain their acceptance. Often sex status intrudes less when it is permitted expression in normal sex-role behavior. For example, women who work in top law firms or hospitals report that male colleagues are used to treating women in a courtly manner and can work best with women who respond graciously. Women who tell off-color jokes or demand always to be treated just like the men cause their colleagues discomfort. Attempts to suppress sex-role behavior in such contexts only succeed in making it obtrusive.

Supervision of the professional interaction.—It was easier for professional women where third parties supported the professional interaction. The professor of medicine instructing a male and a female medical student in a laboratory, for example, ensures that the relationship is task directed (see Goode 1960).

Length of career and length of professional relationships.—In time, men and women in professional relationships usually establish ground rules to govern behavior and eliminate awkwardness which flows from being unsure of whether to focus on the norms governing interaction between men and women or those which govern the relationship between colleagues. For example, women lawyers who had worked in a firm for a number of years and who had early set a precedent of paying their own way, were not reticent in inviting colleagues to lunch. Of course, age itself gives the woman a certain amount of authority and if she has gained eminence, problems are further reduced. Not only do many of the feminine role components attached to the female sex status become less intrusive in professional interactions as the woman grows older (it is probably safe to say that in most cases as the woman ages, her sexual appeal becomes less an object of focus), but her position is bolstered by the rank derived from her experience and her age.

High rank of institution.—When the firm or organization is of high rank and good reputation, it is probably more likely that a woman can expect fair and open treatment than if she were at an institution of lower rank One encounters more adherence to norms at the top and, once a member of an elite group, the woman professional may count on being treated by the universalistic criteria appropriate to the situation. In low-ranking institutions, practitioners tend to be relatively insecure about their own abilities and financial security, and the woman may become a scapegoat. Perhaps this is simply a case where once the woman is "in," she is truly "in."

Women, like others with statuses which do not conform to cultural preferences, must learn the dynamics of handling inappropriate responses to them as well as the skills of their trade. Some are protected by social structure more than others; some have greater personal skill in handling people and ambiguities. The more a woman can depend on the environ-

ment filtering out responses to her sex status which intrude on accomplishing the professional task, and the more she has perfected techniques for handling responses, the more likely she is to continue at her work and proceed along a "normal" career sequence. American women may leave professional careers at almost any point, no matter how high the investment in it or the amount of talent shown for it, with a high degree of cultural approval (Epstein 1969). We suspect that those who enter professional life and who remain within it are from environments in which obstacles are minimal, or they have, for idiosyncratic reasons, been able to define the obstacles as minimal.

CHANGES IN THE STRUCTURE OF PROFESSIONS

I have examined some of the causes of the woman professional's failure to fulfill her career potential. I have also noted some of the factors which can, depending on the case, mitigate this failure. It would be well to close by drawing attention to some of the changes in American society and in the professions, which may have consequence for women's career patterns.

At this time, the most important change seems to be the loss of prestige of traditional elite centers to new foci of professional interest, notably those in the spheres of public welfare and service. Whether or not it proves to be temporary, many of today's gifted young professionals are no longer eager to enter the traditional inner corps of the professions, and are instead being drawn to the new fields of professional opportunity. This seems to be particularly so in law and medicine, where there are signs of a breakdown in the collegial structure and an increasing challenge to the traditional insistence on recruits of particular types.

This disruption of traditional processes, coupled with the recently renewed movement toward women's occupational equality, should bring some important changes in the direction of women's greater participation in the professions. But probably far more radical changes than these, both in the institutions of the economy and the family, will be necessary to eliminate the peculiar problems of professional women, along with the cultural and occupational views of them as deviants.

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Influence of Community Values on Innovativeness[1]

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This study attempts to illustrate the influence of structural effects on innovativeness. Several methods are used to isolate the external constraints and community values from the individual's internalized values and personal attributes. Data from seven truck-crop-growing communities suggest that either analytical constructed community values or perceived community values have an effect upon farmers' innovativeness.

INTRODUCTION

Hundreds of studies have appeared which attempt to account for innovativeness of farmers.[2] *Innovativeness* is the degree to which an individual adopts new ideas earlier than do other individuals (Rogers 1962, p. 19). To date, most research efforts (Havens 1962) have concentrated upon the personal attributes of farmers, such as education, social status, age, communication behavior, and farm size. More recently, the social systems and structure in which farmers live have been examined for their bearing on innovativeness (Qadir 1966; Davis 1968; Saxena 1968). Several studies (Marsh and Coleman 1956; Rahudker 1960; van den Ban 1960; Young and Coleman 1962; Rogers and Burdge 1962) have shown that innovativeness varies between neighborhoods, communities, townships, regions, and development blocks. Researchers have attributed this variation to the presence of social norms and values. The objectives of this study are to investigate, by the employment of three methods of analysis, the influence of structural effects (community values) on innovativeness.

SOCIAL VALUES AND NORMS

Social values specify the relative worth that is attributed to or imposed upon various aspects of human behavior or objects. Social values permit the ranking of things along some desirability scale. Social norms differentiate between proper and improper conduct and govern action directed toward values. This normative system embodies "what ought to be" in contrast to the factual order which embodies "what is" (Davis 1949, p.

[1] The research reported in this study was gathered by Everett M. Rogers, professor of communications, Michigan State University, as a part of the Ohio Agricultural Experiment Station Project Hatch 166, Communication Process and the Adoption of Farm and Home Practices.

[2] The Diffusion Documents Center, located in the Department of Communication, Michigan State University, contains over 1,700 such studies, of which about 1,020 seek to explain innovativeness as their main dependent variable.

52). The normative and factual orders are neither identical nor completely different. The normative order acts as one determinant of the factual order; however, the factual order also influences the normative system.

Most rural sociological studies (Marsh and Coleman 1956; Flinn 1960; Young and Coleman 1962; Rogers and Burdge 1962) of the effect of community norms on innovativeness obtained their measure of norms by averaging the adoption-of-innovativeness scores of farmers. From this factual order, these studies have inferred that a relative high degree of acceptance or rejection of farm practices in a community is associated with social norms and values. Thus, from the farmers' overt behavior, these researchers imply that social processes external to farmers are responsible for their innovativeness. Such inferences from actual behavior may be misleading, because three alternative explanations are possible: (1) farmers are disobeying the norm, (2) there is no norm involved in the farmers' actions, or (3) the farmers are following a norm (Ladd 1957, p. 9).

Quite apart from this normative or group value explanation for farmers' adoption behavior, another interpretation for why farmers adopt or reject farm practices is possible simply by attributing innovativeness to an individual's decision-making process.

There is a basic difference between these two propositions. The latter implies that the individual farmer is responsible for the decision. The former intimates that social constraints are responsible for their innovativeness. Undoubtedly, both the individual farmer's orientation and the social norms and values of the community influence his behavior. The problem becomes one of showing the effects of social structure on innovativeness. Few empirical studies (for some exceptions, see Stouffer et al. 1949; Berelson, Lazarfeld, and McPhee 1954; Lipset, Trow, and Coleman 1956) in either sociology or rural sociology have demonstrated that structural features influence human behavior. Perhaps a partial explanation lies in the difficulty of measuring values and norms and in the survey sampling procedures which make isolated individuals the unit of analysis.

Several studies on structural effects (Blau 1960; Davis, Spaeth, and Huson 1961; Tannenbaum and Bachman 1964; Campbell and Alexander 1965) have been concerned with the theoretical problem, that is, the selection of structural concepts which are theoretically meaningful, and the measurement problem, the separation of the effect of social structure from individual effects. This study uses three theory-measurement methods to isolate structural effects: (1) analytical structural effect–multivariate table (Blau 1960), (2) analytical structural effect–partial correlations (Tannenbaum and Bachman 1964), and (3) perceived structural effect–partial correlations (Campbell and Alexander 1965). The data are taken from a random sample of truck farmers in seven communities of Washington County, Ohio. Because of their location along the Ohio and Muskingum

Rivers, those communities are relatively isolated. Thus, the topography of the area aided in the delineation of community boundaries and somewhat simplified the problem of locating community boundaries, which is often difficult today in the Midwest. The analysis which follows is based on interview responses of seventy-six farmers.

ANALYTICAL STRUCTURAL EFFECT–MULTIVARIATE TABLE

Over a half century ago, Durkheim (1951) confronted the problem of structural effects. The method used by Blau (1960) is similar to Durkheim's approach and consists of three steps:

1. Obtaining an empirical measure (X) of a characteristic of individual group members that theoretically has bearing upon the members' relations to each other.

2. Obtaining a group score or index (X_1) for each group from the responses of group members. This score refers to the group characteristic and not to the individuals.

3. Determining the relationship between the group attribute (X_1) and a dependent variable (Y) while holding the corresponding characteristic of the individual (X) constant.

According to this method, a "structural effect" would presume to be demonstrated if it is found that a farmer, regardless of whether or not he values innovativeness, is more apt to adopt farm practices if he lives in a community where pro-innovator values prevail than if he lives in one where they do not.

Farmers were asked, "What is your opinion of truck growers around here who are always the first to adopt new ideas in truck growing?" The majority (fifty-three) responded favorably. In some communities, however, fewer respondents had favorable images of innovators than in others (see table 1).

To isolate the effects of community values, the communities were divided into two categories: (1) whether 80 percent or more of the community residents have a favorable image of innovators; (2) whether 67 percent or less of the community residents have a favorable image of innovators. Within each category, respondents are divided into those who have favorable images of innovators and those who do not (see table 2).

The first item in table 2 shows that truck farmers with favorable attitudes toward innovators were more often innovative in their behavior than others (compare adjacent columns). It also shows, and this is the pertinent finding, that regardless of their own attitudes, members of communities in which innovators are viewed most favorably were more apt to be innovative than members of communities in which innovators were viewed less favorably (compare alternate columns).

The combination of community values and individual values made a considerable difference for adoption behavior or innovativeness; only 24 percent of the farmers who neither had pro-innovator attitudes nor were in communities where pro-innovator values prevail were innovative, compared to 82 percent of those with pro-innovator attitudes, most of whose neighbors shared these pro-innovator values.

These findings suggest that social values that prevail in a farm community do exert external constraints upon the thinking and acting of its

TABLE 1

FREQUENCY AND PERCENTAGE OF RESPONDENTS HAVING FAVORABLE IMAGES OF INNOVATORS BY COMMUNITY, WASHINGTON COUNTY, OHIO, 1961

Community	*N*	Frequency of Favorable Responses Toward Innovators	Percentages of Favorable Responses Toward Innovators (%)
Oak Grove	8	8	100
Beverly........	9	8	89
Reno...........	7	6	86
Devola........	6	4	67
Hillgrowers....	23	15	65
Lowell.........	16	9	56
Belpre	7	3	43
Total......	76	53	...

TABLE 2

INFLUENCE OF COMMUNITY VALUES ON THE ADOPTION OF FARM PRACTICES

	Community's Image of Innovators			
	Highly Favorable Individual's Value		Less Favorable Individual's Value	
Dependent Variables	Favorable	Not Favorable*	Favorable	Not Favorable*
Degree of innovativeness:†				
High..........	82%	..	42%	24%
Low...........	18%	..	58%	76%
Total.......	100%	...	100%	100%
No. of cases	22	2	31	21

* Includes respondents with both negative or no opinions of innovators.

† The variable was measured by a scale and dichotomized at the median score. The nineteen-item adoption-of-truck-growing-innovation scale was developed with the aid of agricultural scientists in horticulture, agronomy, botany, and entomology at the Ohio State University. The adoption-of-innovation scale took into account adoption versus nonadoption of new ideas and also the relative time that each of the innovations was adopted (for a discussion of the construction of innovativeness scales, see Rogers, Havens, and Cartano 1962).

members. If pro-innovator values prevail in a community, old-fashioned truck-growing farm practices meet with social disapproval, while new techniques gain approval and respect. But this is not the case if pro-innovator values are not as prevalent. The members of these communities are not as motivated to innovativeness and may express social disapproval of neighbors who are. In response to these social sanctions, community members tend to pattern their behavior accordingly.

The Blau method and its application in this study has several problems:

1. The small N in each community makes the computation of community values (X_1) subject to a great deal of variation due to chance.

2. The cutting point between those communities in which 80 percent or more of the respondents possess favorable attitudes toward innovators and those with 67 percent or less is arbitrary (for a discussion of the problem, see Gibbs 1965).

3. Spurious structural effects may be obtained because the dichotomous analysis may be inefficient statistically (for a discussion of the problem, see Tannenbaum and Bachman 1964). Farmers do not simply possess "positive" or "negative" attitudes toward innovators but are likely to differ along a broad continuum, including farmers who have no opinions concerning innovators.

4. Other personal attributes of farmers, such as education, social status, and size of truck-crop operation, which in previous studies were found related to innovativeness, are not used as control variables.

ANALYTICAL STRUCTURAL EFFECT—PARTIAL CORRELATIONS

Tannenbaum and Bachman (1964) proposed several modifications of Blau's methods which can rectify problems 2, 3, and 4. One modification is to measure the structural effect in terms of the correlation between X_1 and Y, with X partialed out. For example, the method consists of holding truck-growers' attitudes toward innovators (X) constant while measuring the relationship between the community's image of innovators (X_1) and the dependent variable, innovativeness (Y). In addition to truck-growers' attitudes toward innovators, other personal attributes, such as education, social status, and acres in truck crops, are successfully and jointly used as control variables.

Obviously this analysis considers all variables to be continuous, thereby eliminating the problem of dichotomies. It also eliminates the arbitrary cutting points between communities' images of innovators by substituting the actual percentage of community members who possess positive attitudes toward innovators.

The partial correlations presented in table 3 show that the relationship between innovativeness and community values of innovators remain strong even after the various personal attributes of the farmers are con-

trolled. Thus, we have an indication that an important analytical structural effect exists independent of personal influences.

PERCEIVED STRUCTURAL EFFECT—PARTIAL CORRELATIONS

The preceding analysis demonstrated that the communities' images of innovators have an effect on the innovativeness of truck farmers beyond the truck farmers' personal attitudes toward innovators. This indicates the presence of an analytical structural effect. But does this analysis prove the existence of a communitywide value system toward which the individual orients himself and upon which he bases his behavior? Or, conversely, if no significant relationship was found between the community value and innovativeness, would this deny the existence of a community value system?

TABLE 3

COMPARISON OF ZERO-ORDER AND PARTIAL-ORDER CORRELATION COEFFICIENTS OF ANALYTICAL CONSTRUCTED COMMUNITY VALUES WITH INNOVATIVENESS

Independent Variable	Dependent Variable	Control Variables	r
Zero-order correlation communities' image of innovators	Innovativeness		379
First-order partial correlations communities' image of innovators	Innovativeness	Truck growers' attitudes toward innovators	.304
	Innovativeness	Age	375
	Innovativeness	Education	337
	Innovativeness	Social status	280
	Innovativeness	Acres in truck crops	335
Fifth-order partial correlation communities' image of innovators.	Innovativeness	All factors	.214

Campbell and Alexander (1965) state that such analytical measures of values held by individuals in a given system neither confirm nor deny the independent existence of a collective value system. For example, if no relationship had been found, the results may have meant that the farmers' personal attitudes were mediating ones which obscured the influence of a community value system. Campbell and Alexander (1965) state that in order to say that X_1 is influential in the community we have to know whether people in the community perceive it as such and act accordingly. Following this line of reasoning, the preceding analysis has not established the existence of such perceived community values by the use of analytic community values.

A question in the interview schedule may provide some evidence of per-

ceived values of innovativeness. Farmers were asked the following question: In your opinion, compared to other communities around here, is your community (*a*) above average in the adopting of new truck farming ideas? (*b*) below average? (*c*) don't know?

Conceptually, in this study the perception of community values of innovativeness has no meaningful counterpart on the individual level, although their measurement is obtained at that level. Also, since no analytical measure of values is required in this analysis, problem 1 (small *N*'s in each community) is resolved.

The data in table 4 indicate that an important perceived structural

TABLE 4

COMPARISON OF ZERO-ORDER AND PARTIAL-ORDER CORRELATION COEFFICIENTS OF PERCEIVED COMMUNITY VALUES WITH INNOVATIVENESS

Independent Variable	Dependent Variable	Control Variable	*r*
Zero-order correlation perceived community value .	Innovativeness		225
First-order partial correlations perception of community innovativeness . .	Innovativeness	Truck growers' attitudes toward innovators	278
	Innovativeness	Age	.218
	Innovativeness	Education	262
	Innovativeness	Social status	.165
	Innovativeness	Acres in truck crops	.204
Fifth-order partial correlation communities' image of innovators	Innovativeness	All factors	215

effect exists independently of the personal values and attributes of farmers. These partial-correlation coefficients suggest that perceived structural effects as well as the analytical structural effects exert influence on farmers' innovativeness.

DISCUSSION

This study demonstrates that analytical structural effects do influence innovativeness of truck growers in seven Ohio communities. Further analysis suggests that these findings may be attributed to the farmers' perception of a community wide value system on innovativeness. Unfortunately, my measure of perceived structural effect is based on the farmers' perceptions of the community's actual innovativeness. More appropriate questions for assessing a community value system would deal

with the farmers' perception of whether most farmers in the community feel that innovativeness is important or not. Perhaps a Likert-type scale (strongly agree to strongly disagree) could measure the perceived value system. An example of a statement might be: In this community most farmers consider the old, established ways of farming best. This same approach could be employed to measure the normative structure concerning innovativeness. Thus values and norms of the collective could be assessed by respondents' perceptions and not by analytical constructed measures of norms and values.

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A Markovian Approach to Measures of Association[1]

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Starting with a time-continuous Markov process in aggregate equilibrium, transition rates are decomposed into effect parameters and random shocks. If the geometric mean is taken as a measure of the joint effect of the effect parameters, we arrive at the ϕ coefficient for an additive decomposition, and Yule's Y and Q for two-way and one-way multiplicative decompositions, respectively. A slightly different exponential decomposition into "tension levels" and "transition heights" between attributes yields $h = \log (ad/bc)$ as the appropriate measure of the effects of these attributes on each other.

INTRODUCTION

Quantitative analysis in sociology was for a long time mostly confined to cross-tabulation. Methodological research was concentrated on obtaining better measures of association and simple tests of significance for these measures. For the relationship between two dichotomous variables there are many such measures. The initial concern in their development has often been the departure from statistical independence in a fourfold table (see table 1).

The departure is given by

$$D = a - \frac{(a+b)(a+c)}{N} = \frac{ad - bc}{N}, \tag{1}$$

and many of the ordinary measures of association can be expressed in terms of this departure from statistical independence. For example,

$$r_a = \frac{2D}{N-1}, \tag{2}$$

$$\phi = r_b = r_\phi = \frac{ND}{\sqrt{[(a+b)(c+d)(a+c)(b+d)]}}, \tag{3}$$

$$Q = \frac{ND}{ad+bc} \quad \text{and} \quad f = \frac{ad}{bc} = \frac{ND}{bc} + 1\,. \tag{4}$$

[1] I am grateful to Professor James S. Coleman for suggesting that I try to find a connection between his asymmetric measures of effect parameters based on Markov processes, and the traditional coefficients of association. He, as well as Mr. T. Robert Harris and Dr. Robert A. Gordon of the Social Relations Department at Johns Hopkins University, gave valuable comments on an earlier draft of this paper. None of them, however, can be held responsible for its defects.

These measures are symmetric in the same sense as the correlation coefficient; they are unaffected by the causal order of the variables.

Goodman has pointed out the interrelationships between some of the measures of association: the cross-product ratio $f = ad/bc$, Yule's coefficient of association Q, Yule's coefficient of colligation Y, and the natural logarithm h of f. Goodman shows that Q, Y, and h are monotonic functions of the cross-product ratio f, while this is not the case for the ϕ coefficient (Goodman 1965).

Some years ago James S. Coleman developed a mathematical model for estimating the causal effects of two or more dichotomous variables. On the basis of a time-continuous Markov process he found an asymmetric measure for a model with additive effects (Coleman 1964, chaps. 4, 5). But on the basis of this approach there is no symmetric measure for the case when attributes are interdependent and one wants merely a measure of association.

TABLE 1

THE FOURFOLD TABLE

a	b	$a+b$
c	d	$c+d$
$a+c$	$b+d$	N

The purpose of this article is to develop some measures of association for interdependent attributes. The starting point is the same as Coleman's: a time-continuous Markov process. By this additive model, and by a multiplicative and an exponential model, we will show how the measures we arrive at are those discussed by Goodman. Finally, we will discuss the relative merits of these statistics.

The value of this approach is that we can give a causal interpretation of the symmetric measures of association. Moreover, the same mathematical model is used for different forms of data: "In particular, it is valuable to use measures for analysis of cross-sectional data that derive from the same models used in analysis of data at two or more points in time. By so doing, we are able to compare directly measures obtained from cross-sectional data with measures obtained from over-time data. The comparison, when the measures derive from the same model, can quickly show whether the effects shown in the sample are at aggregate equilibrium, and if not, if the relationships are increasing or decreasing" (Coleman 1968, pp. 465–66).

THE GENERAL MODEL

The model of change in a system of individuals characterized by two dichotomous attributes is based on the following assumptions:

1. An individual in attribute state i has a probability $q_{ij}dt$ of changing to state j in the infinitesimally small time period dt, and can change only one attribute at a time.

2. This probability is the same for all individuals in the state.

3. The probability is independent of the length of time an individual has been in the state i, and does not change over time.

This gives rise to the model represented in figure 1, where A, B, C, D characterize states, and a, b, c, d, the individuals in these states, respectively.

By dividing through by N, the total number of individuals in the system, we obtain the proportions in the states (cells). We can then set up four

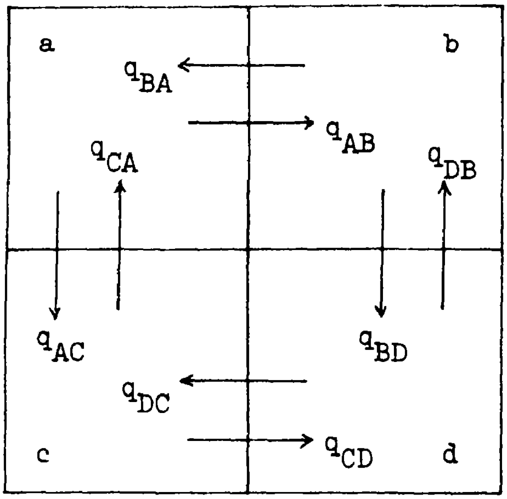


FIG. 1.—The general model with transition rates (q_{ij}'s) between the states a, b, c, d

differential equations for the rates of change in the proportion in each cell; these equations will be of the following type, where the p_n's represent the proportions in the cells:

$$\frac{dp_i}{dt} = -(q_{ij} + q_{ik})p_i + q_{ki}p_k + q_{ji}p_j \,, \qquad (5)$$

where j and k represent the neighboring cells of i.

4. Next we require that the system be in aggregate equilibrium, that is, $dp_i/dt = 0$, which means that the proportions, or the numbers of individuals (a,b,c,d) in each state, are constant. It also implies that the *net* clockwise (or counterclockwise) flow of individuals across each border is constant, k.

5. If we set the sum of these net flows ($4k$) equal to zero or, equivalently (after transposing), require

$$aq_{AB} + bq_{BD} + dq_{DC} + cq_{CA} = aq_{AC} + cq_{CD} + dq_{DB} + bq_{BA} \,, \qquad (6)$$

this implies that the numbers of individuals flowing in opposite directions across each border between two cells are equal. For example, $aq_{AB} = bq_{BA}$. But they may be different for different borders. (The capital subscripts indicate transition rates between the cells where the numbers of individuals are represented by the corresponding small letters—that is, q_{AB} is the transition rate from the cell containing a individuals to the cell containing b individuals, etc.)

The last two assumptions enable us to estimate the ratio between the transition rates. For example, $q_{AB}/q_{BA} = b/a$.

We will now go on to discuss three models which we arrive at by making

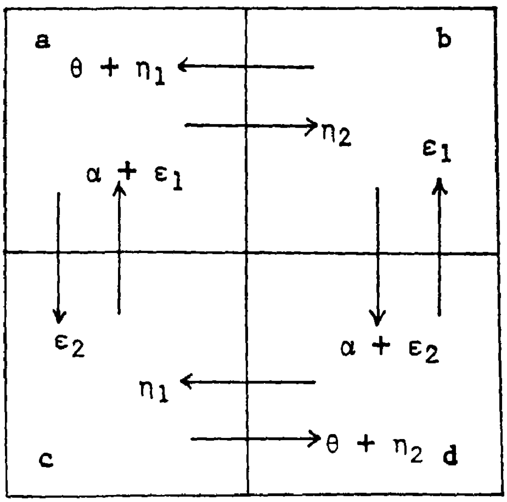


FIG. 2.—Two-way additive model: the transition rates are decomposed into effect parameters (α and θ) and random shocks (the ϵ's and η's). Note the direction of the effect parameters.

additional assumptions about the nature of the q_{ij}'s. The general strategy is to assume that they consist of two parts—an effect parameter and a parameter for random shocks—and then develop estimates of these parameters. For the first, the relation between them will be additive; for the second, multiplicative. For the third model, the exponential, the strategy is slightly different.

THE ADDITIVE MODEL

If we decompose the transition rates from figure 1 in the manner depicted in figure 2, we get four equations for the flow of individuals across each of the four borders between the cells. In these equations α and θ represent effect parameters, and ϵ_1, ϵ_2, η_1, η_2 represent random shocks:

$$a\epsilon_2 = c(\alpha + \epsilon_1)\,, \tag{7}$$

$$d\eta_1 = c(\theta + \eta_2)\,, \tag{8}$$

$$d\epsilon_1 = b(a + \epsilon_2)\,, \tag{9}$$

$$a\eta_2 = b(\theta + \eta_1)\,. \tag{10}$$

With these equations we can express the effect parameters relative to the total of a, ϵ_1, and ϵ_2, and in terms of the frequencies in the cells (states) of the contingency table:

$$\frac{a}{a+c} = \frac{c(a+\epsilon_1)}{\epsilon_2\left[\frac{c(a+\epsilon_1)}{\epsilon_2} + c\right]} = \frac{a+\epsilon_1}{a+\epsilon_1+\epsilon_2}\,, \tag{11}$$

$$\frac{b}{b+d} = \frac{d\epsilon_1}{(a+\epsilon_2)\left(\frac{d\epsilon_1}{a+\epsilon_2} + d\right)} = \frac{\epsilon_1}{a+\epsilon_1+\epsilon_2}\,. \tag{12}$$

Subtracting (12) from (11) gives the size of the effect parameter relative to the sum of the parameters:

$$\frac{a}{a+\epsilon_1+\epsilon_2} = \frac{a}{a+c} - \frac{c}{b+d}\,. \tag{13}$$

Now it is immediately clear that this is identical with the percentage difference across the columns in the original contingency table (table 1).

By similar computation we get from equations (8) and (10)

$$\frac{\theta}{\theta+\eta_1+\eta_2} = \frac{a}{a+b} - \frac{c}{c+d}\,. \tag{14}$$

This measure has also been called the θ coefficient in the Dorn-Stouffer-Tibbitts-Goodman (DSTG) method of analysis, but without justification (Goodman 1965, p. 297). It is nothing but the percentage difference across rows in the original contingency table.

Now that we have estimates of the relative size of the effect parameters (which are asymmetric), the question arises, What would be a reasonable measure of their joint effect? To use some sort of average is one way of answering this question. If we want to express the ratio of explained to total variance in a single fraction, this cannot be done by the arithmetic mean because the numerator will include random shocks as factors:

$$\frac{1}{2}\left(\frac{a}{a+\epsilon_1+\epsilon_2} + \frac{\theta}{\theta+\eta_1+\eta_2}\right) = \frac{2a\theta + a\eta_1 + a\eta_2 + \theta\epsilon_1 + \theta\epsilon_2}{2(a+\epsilon_1+\epsilon_2)(\theta+\eta_1+\eta_2)}\,. \tag{15}$$

This objection is avoided if we take the geometric mean as a measure of the combined effect of the effect parameters:

$$\left(\frac{a}{a+\epsilon_1+\epsilon_2}\times\frac{\theta}{\theta+\eta_1+\eta_2}\right)^{1/2}=\left[\left(\frac{a}{a+c}-\frac{b}{b+d}\right)\left(\frac{a}{a+b}-\frac{c}{c+d}\right)\right]^{1/2}$$
$$=\left[\frac{ad-bc}{(a+c)(b+d)}\times\frac{ad-bc}{(a+b)(c+d)}\right]^{1/2} \qquad (16)$$
$$=\frac{ad-bc}{\sqrt{[(a+c)(b+d)(a+d)(c+d)]}}=\phi\,,$$

which the reader immediately recognizes as the ϕ coefficient.

The ϕ coefficient, therefore, can be interpreted as the geometric mean of the effect parameters in a time-continuous Markov process with two-way additive effects.

By "two-way" we mean that the effect parameters point in opposite directions, the a's for the columns and the θ's for the rows (see fig. 2 and compare with fig. 3).

The simplest intuitive interpretation of the ϕ coefficient for a fourfold table is that it is the geometric mean of the percentage differences across rows and across columns. Since the θ coefficient is the percentage difference across rows, the ϕ coefficient can also be considered the geometric mean of two θ coefficients, one for the rows and one for the columns.

What happens if one of the percentage differences across rows or columns is zero? It is easy to show that the percentage differences across rows must be zero if the percentage difference across columns is zero, and vice versa.[2]

[1] We imposed restriction 5 in the general model because the system can be in equilibrium in two ways: either there is the same number flowing in both directions across each of the boundaries, respectively, or there can be a surplus flow k in a clockwise or counterclockwise direction. If the net flow is clockwise, eqq. (7–10) have to be modified so that this net flow is included:

$$c(a+\epsilon_1)-a\epsilon_2=k\,,$$
$$a\eta_2-b(\theta+\eta_1)=k\,,$$
$$b(a+\epsilon_2)-d\epsilon_1=k\,,$$
$$d\eta_1-c(\theta+\eta_2)=k\,.$$

This expresses the surplus flow from C to A, from A to B, from B to D, and from D to C, which all have to be equal ($=k$) when the system is in equilibrium. Above we assumed $k=0$, by restriction 5 in the general model. If $k\neq 0$, computations similar to eqq. (11–14) yield

$$\frac{a}{a+c}-\frac{b}{b+d}=\frac{a+\epsilon_1-k/c}{a+\epsilon_1+\epsilon_2-k/c}-\frac{\epsilon_1+k/d}{a+\epsilon_1+\epsilon_2+k/d}\,.$$

The effect of subtracting the same number from the numerator and denominator is to decrease the fraction, whereas adding the same number increases it. So when k is posi-

Coleman also developed a "one-way" model in his *Introduction to Mathematical Sociology* (Coleman 1964, pp. 145 ff.). This model assumes that there is an effect of each attribute only in one direction. If the two states on the two attributes are denoted by "plus" and "minus" signs, then a minus sign in the one-way model indicates the absence of some characteristic, and the effect of the characteristic occurs only in its presence. (In the two-way model, we assumed that the effect of the attribute was the same for "plus" and "minus," but in opposite directions.) See figure 3.

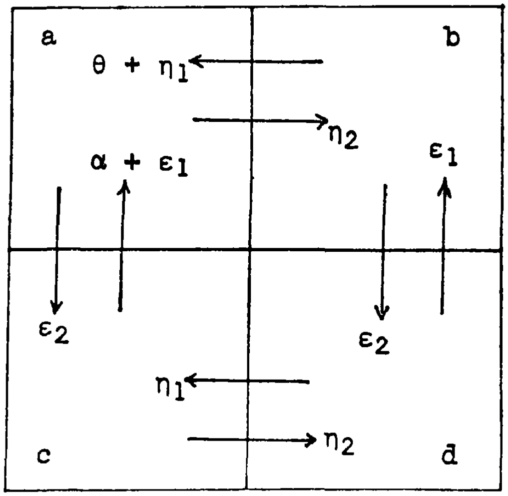


FIG. 3.—One-way additive model: one of the α's and one of the θ's have been dropped from the two-way model.

In this case the equations for the effect parameters become

$$\frac{\alpha}{\alpha + \epsilon_1 + \epsilon_2} = \frac{ad - bc}{d(a + c)} \tag{17}$$

and

$$\frac{\theta}{\theta + \eta_1 + \eta_2} = \frac{ad - bc}{d(a + b)}\,, \tag{18}$$

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tive, the equation above is *smaller* than it would be if $k = 0$. For the complementary difference we obtain

$$\frac{a}{a + b} - \frac{c}{c + d} = \frac{\theta + \eta_1 + k/b}{\theta + \eta_1 + \eta_2 + k/b} - \frac{\eta_1 - k/d}{\theta + \eta_1 + \eta_2 - k/d}\,.$$

So this equation is *larger* than it would be if $k = 0$. (If k is negative, so that the net flow is counterclockwise, the first equation would be larger and the second, smaller.) But since our measure of association is the geometric mean of these two factors, the effect of $k \neq 0$ will to some extent cancel out, which makes the measure more robust. In most sociological research, distortions due to sampling fluctuations, response unreliability, etc. are likely to have greater effect. Likewise, the assumption that the probability of change is the same for all individuals and is time-independent may be violated and reduce the goodness of the estimate of joint effect.

so that the geometric mean becomes

$$m_1 = \frac{ad - bc}{d\sqrt{[(a+b)(a+c)]}}. \tag{19}$$

This measure does not possess the property one usually requires of measures of association: that it range between +1 and −1. It is, moreover, undefined for $d = 0$.

To obtain the one-way model depicted in figure 3, we simply dropped the effect parameters on the arrows coming into cell d in figure 2. Depending on which of the two α's and which of the two θ's we drop, we can get three other measures for one-way additive effects:

$$m_2 = \frac{ad - bc}{\sqrt{[ad(a+c)(c+d)]}}, \tag{20}$$

$$m_3 = \frac{ad - bc}{\sqrt{[ad(a+b)(b+d)]}}, \tag{21}$$

$$m_4 = \frac{ad - bc}{d\sqrt{[(b+d)(c+d)]}}. \tag{22}$$

In the multiplicative model, to which we now turn, we are more fortunate—there the one-way effects model gives one unique measure of association, and the multiplicative two-way model is also more flexible than the additive two-way model.

THE MULTIPLICATIVE MODEL

We will now decompose the transition rates (the q_{ij}'s) in a different manner: instead of being additive, the components are now multiplicative. The simplest way to describe this is by replacing the addition signs in figure 2 with multiplication signs, thereby getting a model where the transition rates are partitioned into factors. Retaining the other restrictions, we then have a multiplicative model, which yields four equations for the flows across each of the four borders (compare eqq. [7–10]):

$$a\epsilon_2 = c\alpha\epsilon_1, \tag{23}$$

$$a\eta_2 = b\theta\eta_1, \tag{24}$$

$$b\alpha\epsilon_2 = d\epsilon_1, \tag{25}$$

$$c\theta\eta_2 = d\eta_1. \tag{26}$$

From (23) and (25) we get

$$\frac{c\alpha\epsilon_1}{d\epsilon_1} = \frac{a\epsilon_2}{b\alpha\epsilon_2}, \tag{27}$$

resulting in

$$\alpha^2 = \frac{ad}{bc} \quad \text{or} \quad \alpha = \sqrt{\frac{ad}{bc}}\,; \tag{28}$$

and from (24) and (26) we get

$$\frac{b\theta\eta_1}{d\eta_1} = \frac{a\eta_2}{c\theta\eta_2}\,, \tag{29}$$

resulting in

$$\theta^2 = \frac{ad}{bc} \quad \text{or} \quad \theta = \sqrt{\frac{ad}{bc}}\,. \tag{30}$$

In the two-way multiplicative model we thus get a measure of the absolute values of the effect parameters α and θ, which turn out to be equal, and, moreover, equal to the square root of the cross-product ratio.

To obtain a measure of their joint effect, we again take the geometric mean of the effect parameters (which in this case equals the arithmetic mean):

$$\sqrt{\alpha\theta} = \left(\sqrt{\frac{ad}{bc}}\sqrt{\frac{ad}{bc}}\right)^{1/2} = \sqrt{\frac{ad}{bc}} = \sqrt{f}\,. \tag{31}$$

As mentioned, f is the odds or cross-product ratio

$$f = \frac{ad}{bc} = \frac{a/b}{c/d} \tag{32}$$

—"the ratio between the ratios"—and there are simple relationships between f and Yule's classic measures of association,

$$Q = \frac{f-1}{f+1} = \frac{ad-bc}{ad+bc}\,, \tag{33}$$

and his "coefficient of colligation,"

$$Y = \frac{\sqrt{f}-1}{\sqrt{f}+1} = \frac{\sqrt{(ad)}-\sqrt{(bc)}}{\sqrt{(ad)}+\sqrt{(bc)}}\,, \tag{34}$$

which thus are monotonic functions of f. It seems reasonable to make this transformation, since f ranges between zero and infinity. By Yule's measures we have, so to speak, standardized the measure of association f. both Q and Y have a range between $+1$ and -1 and are zero for no association ($f = 1$). And, as Goodman has pointed out, though the specific questions these statistics provide direct answers to are different, they are in a certain sense equivalent: "Since knowledge about the value of f in a single 2×2 table is equivalent to knowledge about the value of any monotonic function of f, the measures of association f, Q, Y, and h [$=\log f$] all measure, in a certain sense, the same aspect of association in the table, though each of these four indexes makes use of a different scale for measuring this one aspect of association" (Goodman 1965, p. 295).

Yule's coefficient of colligation, Y, *therefore, can be interpreted as the standardized geometric mean of the effect parameters in a time-continuous Markov process with two-way multiplicative effects.*

In the additive model the "standardization" took care of itself by the fact that we had the *relative* size of the effect parameters, whereas in the multiplicative model we have the *absolute* size of the effect parameters estimated (compare eqq. [13] and [14] with eqq. [28] and [30]).

Since we have more unknown than known factors in equations (23–26), we cannot obtain estimates of the absolute size of the random-shock

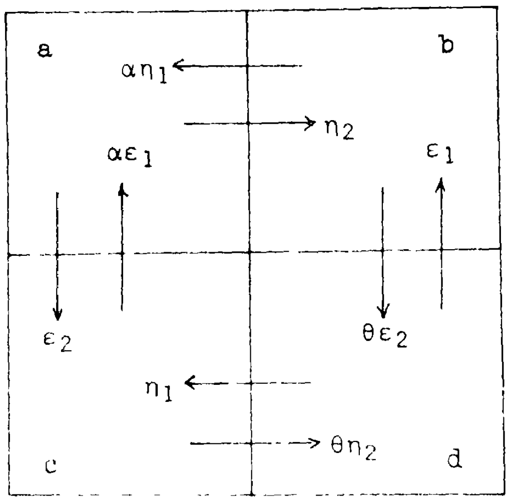


FIG. 4.—Two-way multiplicative model. The direction of the effect parameters has been changed (compare fig. 2).

parameters. It is, however, possible to get simple measures of their relative sizes:[3]

$$\frac{ca\epsilon_1}{ba\epsilon_2} = \frac{a\epsilon_2}{d\epsilon_1} \quad \text{gives} \quad \frac{\epsilon_1}{\epsilon_2} = \sqrt{\frac{ab}{cd}}\,. \tag{35}$$

Similarly

$$\frac{b\theta\eta_1}{c\theta\eta_2} = \frac{a\eta_2}{d\eta_1} \quad \text{gives} \quad \frac{\eta_1}{\eta_2} = \sqrt{\frac{ac}{bd}}\,. \tag{36}$$

Let us then look at some modifications of this model. The *direction* of the effect parameters can be changed in the way indicated in figures 4 and 5.

[3] These ratios can be standardized in the same manner as $\sqrt{f}$, yielding

$$E_1 = \frac{\sqrt{(ab)} - \sqrt{(cd)}}{\sqrt{(ab)} + \sqrt{(cd)}} \quad \text{and} \quad E_2 = \frac{\sqrt{(ac)} - \sqrt{(bd)}}{\sqrt{(ac)} + \sqrt{(bd)}}\,.$$

Changing the direction of the effect parameters in this manner yields th following sets of equations:

For figure 4

$$a\epsilon_2 = ca\epsilon_1\,, \tag{37}$$

$$a\eta_2 = ba\eta_1\,, \tag{38}$$

$$d\epsilon_1 = b\theta\epsilon_2\,, \tag{39}$$

$$d\eta_1 = c\theta\eta_2\,; \tag{40}$$

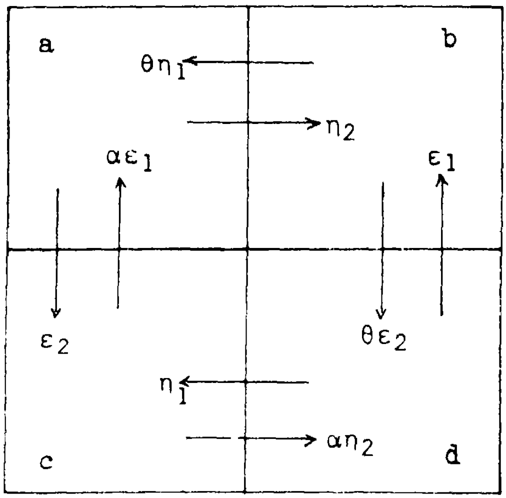


Fig. 5.—Two-way multiplicative model. The direction of the effect parameters ha been changed (compare figs. 4 and 2).

and for figure 5

$$a\epsilon_2 = ca\epsilon_1\,, \tag{41}$$

$$a\eta_2 = b\theta\eta_1\,, \tag{42}$$

$$d\epsilon_1 = b\theta\epsilon_2\,, \tag{43}$$

$$d\eta_1 = ba\eta_2\,. \tag{44}$$

From these two sets of equations we obtain, respectively,

$$\frac{ca\epsilon_1}{d\epsilon_1} = \frac{a\epsilon_2}{b\theta\epsilon_2} \quad \text{or} \quad a\theta = \frac{ad}{bc} = f \tag{45}$$

and

$$\frac{b\theta\eta_1}{d\eta_1} = \frac{a\eta_2}{ca\eta_2} \quad \text{or} \quad a\theta = \frac{ad}{bc} = f\,. \tag{46}$$

Thus, in the multiplicative model we can obtain estimates of the product of the effect parameters whatever their direction is. In the additive model

we can obtain estimates of the effect parameters only when their direction is as depicted in figure 2. In the multiplicative model we therefore have greater freedom in manipulating the causal system, since the geometric mean of the effect parameters is equal to $\sqrt{f}$.

Let us then turn to a *one-way* multiplicative model. Graphically it looks like figure 3, except that the addition signs are changed to multiplication signs. We get the following set of equations:

$$c\alpha\epsilon_1 = a\epsilon_2\,, \tag{47}$$

$$b\theta\eta_1 = a\eta_2\,, \tag{48}$$

$$d\epsilon_1 = b\epsilon_2\,, \tag{49}$$

$$d\eta_1 = c\eta_2\,, \tag{50}$$

which again yield

$$\frac{c\alpha\epsilon_1}{d\epsilon_1} = \frac{a\epsilon_2}{b\epsilon_2} \quad \text{or} \quad \alpha = \frac{ad}{bc} \tag{51}$$

and

$$\frac{b\theta\eta_1}{d\eta_1} = \frac{a\eta_2}{c\eta_2} \quad \text{or} \quad \theta = \frac{ad}{bc}\,. \tag{52}$$

In this case, the geometric mean of the two factors α and θ is f, and since Q is a monotonic function of f, we reach the following conclusion:

Yule's coefficient of association, Q, *can be interpreted as the standardized geometric mean of the effect parameters in a time-continuous Markov process with one-way multiplicative effects.*

We mentioned above that for the one-way additive model we would obtain four coefficients for the joint effect (the M_i's), depending on which α and θ we drop (compare eqq. [19–22]). The multiplicative one-way model is unaffected by this and therefore yields Q in all four cases.

Finally, the flexibility of the multiplicative models comes out in another manner. Returning for the moment to the *two-way* models, we have in both the additive and multiplicative versions assumed that there were only two different effect parameters, α and θ. As long as we are interested only in their *joint* effect, this assumption can be dropped for the two-way multiplicative model, and we can operate with four different effect parameters, α, β, θ, ζ, where β takes the place of one of the α's and ζ replaces one of the θ's. By the same computations we have performed several times, we get these two equations for the effect parameters:

$$\alpha\beta = \frac{ad}{bc} \tag{53}$$

and

$$\theta\zeta = \frac{ad}{bc}\,. \tag{54}$$

To get a measure of their joint effect, we again take the geometric mean of these four effect parameters,

$$(\alpha\beta\theta\zeta)^{1/4} = (f^2)^{1/4} = \sqrt{f}\,. \tag{55}$$

So even in the most general multiplicative model with two-way effects, Yule's coefficient of colligation, Y, will be the appropriate standardized measure of association.

In conclusion, therefore, for the multiplicative model, Yule's Y is the standardized geometric mean for two-way effects, and Yule's Q is the standardized geometric mean for one-way effects.[4]

THE EXPONENTIAL MODEL

In the two models we have considered above, the additive and multiplicative, the transition rates are attributes not of states but rather of the relation between states. In an unpublished paper, Coleman and Tukey have argued that, as far as attitude change is concerned, these models have little substantive content (Coleman and Tukey 1968). They would like to see a model in which the factors affecting a given state would affect some parameter associated with the state itself, and which would express itself through changes in the transition rates. But the transition rates should not be wholly determined by the states, since this is incompatible with the affinities between certain pairs of attitudes. What is desired is a model characterized by "tension levels" within and "transition heights" between states.

Coleman and Tukey find an analogous mathematical model in physical chemistry. Some twenty years ago Henry Eyring developed a stochastic model for absolute reaction rates in chemical kinetics, where transition rates are decomposed into a free energy level F_i of the state i and a free energy level F_{ij} of the boundary between i and j. The transition rate is a function of the difference between these levels:

$$q_{ij} = k_1 e^{-k_2(F_{ij}-F_i)}\,. \tag{56}$$

To get an intuitive idea of the process, one can imagine valleys and mountain passes: the higher the passes, the less flow or movement between the valleys; the higher a valley, the more flow out of it.

By taking the natural logarithm of equation (56), we have

$$\log q_{ij} = \log k_1 - k_2(F_{ij} - F_i)\,. \tag{57}$$

However, this equation has too many degrees of freedom for us to estimate the parameters in terms of the information in a fourfold table—there are

[4] By the same line of argument as for the additive model (see n. 2), it is easy to show that when assumption 5 in the general model does not hold, the effects tend to cancel out.

too many unknowns. But we can estimate two related quantities if we let

$$\begin{aligned} s_i &= (\log k_1 + k_2F_i) - \Sigma(\log k_1 + k_2F_i)/n \\ &= (k_2F_i - k_2\Sigma F_i/n) = k_2(F_i - \bar{F}_i) , \end{aligned} \tag{58}$$

where n equals the number of F_i's, and

$$s_{ij} = k_2F_{ij} . \tag{59}$$

We have then expressed the state energy level in terms of its deviation from the mean—s_i in (58)—and a linear transformation of the border energy level—s_{ij} in (59). Since $\bar{F}_i$ then becomes the reference point for the whole system, we can arbitrarily choose its value so that $(\log k_1 + \bar{F}_i) = 0$. We then have

$$\begin{aligned} \log q_{ij} &= \log k_1 + k_2F_i - k_2F_{ij} \\ &= (\log k_1 + k_2F_i) - (\log k_1 + k_2\bar{F}_i) - k_2F_{ij} \\ &= k_2(F_i - \bar{F}_i) - k_2F_{ij} \\ &= s_i - s_{ij} , \end{aligned} \tag{60}$$

which are the parameters Coleman and Tukey use to characterize attitudes: s_i and s_{ij} represent tension levels and transition heights, respectively.

Equation (58) implies

$$\Sigma s_i = 0 , \tag{61}$$

since it is the sum of deviations around a mean. Moreover, $F_{ij} = F_{ji}$, since they represent the energy needed to attain a certain level ("mountain pass") with respect to a single reference point for the whole system ("sea level"), which is the same irrespective of which state ("valley") one starts from. In terms of the Coleman-Tukey model, therefore, $s_{ij} = s_{ji}$. With these restrictions we can obtain estimates for the tension levels.

We will not go into this estimation here. However, the authors state that the consistency between two attitudes is measured by $(s_B + s_C - s_A - s_D)$, where the subscripts denote the cells in a fourfold table, in the same manner as for the additive and multiplicative models (in other words, we have a four-state system). We will now develop an estimate of this effect of the attitudes on each other.

If we make the same assumptions for this model as stated for the other two (compare The General Model, on p. 993), we get these four equations for the flows across the boundaries when we use the formula for the transition rates given in equation (60):

$$ae^{(s_A - s_{AC})} = ce^{(s_C - s_{AC})} , \tag{62}$$

$$ae^{(s_A - s_{AB})} = be^{(s_B - s_{AB})} , \tag{63}$$

$$de^{(s_D - s_{BD})} = be^{(s_B - s_{BD})} , \tag{64}$$

$$de^{(s_D - s_{CD})} = ce^{(s_C - s_{CD})} . \tag{65}$$

By taking the logarithm of these equations, cancelling and transposing, we have:

$$s_C - s_A = \log a - \log c , \tag{66}$$

$$s_B - s_A = \log a - \log b , \tag{67}$$

$$s_B - s_D = \log d - \log b , \tag{68}$$

$$s_C - s_D = \log d - \log c . \tag{69}$$

Several measures of association are possible, but since the tension levels add to zero, it seems reasonable to use a "difference between the differences" criterion for association—that is, look at the difference between the diagonal tension levels. Since the tension level is inversely proportional to the number in a cell, we use the criterion in the reverse order of the way in which the criterion is ordinarily used.[5] The simplest way to arrive at this is to add equations (67) and (69):

$$\begin{aligned}(s_B - s_A) + (s_C - s_D) &= (s_B + s_C) - (s_A + s_D) \\ &= \log a - \log b + \log d - \log c \qquad (70) \\ &= \log (ad/bc) = \log f = h .\end{aligned}$$

Thus we arrive at the same criterion for consistency between attitudes as do Coleman and Tukey ($s_B + s_C - s_A - s_D$), and it is equal to the logarithm of the cross-product ratio.

The logarithm of the cross-product ratio, h = *log* (ad/bc), *therefore, can be interpreted as the effect of two attributes on each other in a time-continuous Markov model with exponential decomposition of transition rates into tension levels of, and transition heights between, these attributes.*[6]

[5] For simple cell frequencies the "difference between the differences" is given by $[(a - b) - (c - d)] = [(a + d) - (b + c)]$. This can be standardized by dividing through by N. In the present case, the difference criterion is actually a "ratio between the ratios" criterion, since the model is a special kind of multiplicative model, and we have taken logarithms to get eqq. (66–69). If we use the ratio criterion on eqq. (67) and (69), we obtain $(e^{s_B}e^{s_C})/e^{s_A}e^{s_D} = ad/bc$, the logarithm of which equals eq. (70).

[6] We can standardize $h = \log f$ by a hyperbolic tangent retransformation:

$$\tan (h) = \frac{e^{\log f} - e^{-\log f}}{e^{\log f} + e^{-\log f}} = \frac{f^2 - 1}{f^2 + 1} = \frac{(ad)^2 - (bc)^2}{(ad)^2 + (bc)^2} = J .$$

This coefficient has structural similarities with Yule's Q and Y (which are hyperbolic tangent transformations of $\log f^{1/2}$ and $\log f^{1/4}$, respectively). It is a coefficient which will blow up the degree of association in a table, and should not be used unless justified by theoretical considerations. Compare the discussion below on the choice between Q and Y.

THE DICHOTOMOUS CUBE

By decomposing the transition rates of the general model (figure 1) in various ways, we have been able to interpret the most used measures of association for 2×2 tables in terms of a Markov process. The same strategy can be used to develop estimates of effect parameters, and measures of association based on them, for second-order interaction for the $2 \times 2 \times 2$ table, or the dichotomous cube, as it has also been called.

The multiplicative model in this case yields, if we take the geometric mean of the estimates for the effect parameters, for the two-way model

$$g = \left(\frac{adfg}{bceh}\right)^{1/4} = B^{1/4}, \tag{71}$$

where B is Bartlett's criterion for second-order interaction (Bartlett 1935), and $e, f, g, h,$ are the cell entries in the second layer of the dichotomous cube. The one-way model yields $\sqrt{B}$; and the exponential model, $\log B$. They are thus analogous to the measures for the fourfold table and can be standardized in the same way. An additive model yields a rather monstrous coefficient with six multiplicative terms; moreover, its behavior is sometimes capricious. Care should also be exercised in the use of B and its derivatives, since it breaks down when one of its factors is zero.

TABLE 2

VALUES OF THE CELL ENTRIES IN A FOURFOLD TABLE WHICH GIVE THE EXTREME VALUES OF THE COEFFICIENTS OF ASSOCIATION

Coefficient	0	+1	−1
ϕ	$ad = bc$	$b = c = 0$	$a = d = 0$
Q, Y	$ad = bc$	b or $c = 0$	a or $d = 0$
h	$ad = bc$	.	.

DISCUSSION

In this part we shall give a short evaluation of the measures of association we have arrived at by our general model, the relation between them, and criteria for choice between them.

The behavior of the ϕ coefficient and Yule's Q and Y is well known and can be briefly summarized as in table 2. For Q and Y to be unity, only one of the cell entries in the fourfold table has to be zero. Expressed in another way: all individuals possessing an attribute, say $X1$, on the first dimension have to be a subset of those possessing an attribute, say $Z1$, on the other dimension. For ϕ to be unity, two diagonal cells have to be empty. Expressed in another way: all individuals possessing attribute $X1$ on the first

dimension have to coincide with those who possess $Z1$ on the second dimension, *and* those who possess $X2$ on the first dimension have to coincide with those who possess $Z2$ on the second. It was these properties which led Kendall and Stuart to distinguish between *complete* association ($Q = 1$ $\phi \neq 1$) and *absolute* association ($\phi = 1$) (Kendall and Stuart 1961, p. 540).

The coefficients Q and Y can be said to measure "corner correlation." By this is meant that if one of the cell entries a, b, c, or d is either much smaller or much greater than the other three, the absolute value of Y or Q will be greater than the absolute value of ϕ, and the difference increases when the discrepancy between the "deviating" cell and the other three increases. Since this is so, it raises the question of whether there is any relationship between the additive and multiplicative coefficients.

It turns out that there is a simple relationship between the *two-way* additive and multiplicative models in a special case: when the distribution in the fourfold table (or dichotomous cube) is symmetric. By symmetric we mean that all univariate distributions are equal when we collapse the tables. In the 2×2 case, when $a = d$ and $b = c$,

$$\phi = \frac{ad - bc}{\sqrt{[(a+b)(c+d)(a+c)(b+d)]}} = \frac{a^2 - b^2}{(a+b)^2} = \frac{a-b}{a+b}\,, \tag{72}$$

$$Y = \frac{\sqrt{ad} - \sqrt{bc}}{\sqrt{ad} + \sqrt{bc}} = \frac{\sqrt{a^2} - \sqrt{b^2}}{\sqrt{a^2} + \sqrt{b^2}} = \frac{a-b}{a+b} = \phi\,. \tag{73}$$

These relationships do not hold for the one-way models.

Since we have these simple identities of the two-way coefficients when the tables are symmetric, and the multiplicative coefficient Y measures corner correlation when they are not, it seems that we can use the difference between them in roughly the same manner as we use the difference between the median and the mean for univariate distributions: to get a measure of the degree of asymmetry in the table. For the 2×2 case we can define the *asymmetry coefficient*, A, as

$$A = (Y - \phi)\,. \tag{74}$$

We have now briefly discussed the behavior of our association measures. The final question we shall comment on is that of the criteria for choice between them.

Logically this is a question of which model follows from the theory we are investigating. This involves two decisions: (1) should the model be additive, multiplicative, or exponential; and (2) if additive or multiplicative, should the model be one-way or two-way? If answers to these questions can be given on the basis of the sociological theory under investigation, the choice of coefficient of association is determined. The options are sum-

marized in table 3. As the reader will remember, we got four equations (m_i's) for the one-way effects in the additive model (eqq. [19–22]).

The choice is simple, then, when it can be justified on theoretical grounds. To *test* which model fits the data best, one would in most cases have to use over-time data and investigate how well actual and estimated transition rates match. However, this is not the nature of most of the data that sociologists deal with. The question therefore arises whether there are other, more practical criteria for choosing between the coefficients.

On grounds of computational simplicity, Q is of course the best, since it involves only the elementary arithmetic operations of addition and multiplication.

However, if Y and ϕ are used, we can get the additional information contained in the asymmetry coefficient A. In addition, ϕ can be simply interpreted as the correlation coefficient (r_ϕ) for two variables which both take on only the values zero and one. Thus its square can be taken as a measure of the amount of the variance explained.

TABLE 3

SUMMARY TABLE OF MARKOV-MODEL INTERPRETATIONS OF MEASURES OF ASSOCIATION FOR FOURFOLD TABLES

Model	Two-Way	One-Way
Additive	ϕ	M_i
Multiplicative	Y	Q
Exponential	h	

Moreover, if we use the cross-product ratio f as the measure of association underlying both Q and Y, it is simple to show that Q is larger than Y (compare fig. 6). It is seen that Q is more sensitive to changes in values of f close to unity, but not much, since both Q and Y increase fast in this region. When f deviates from unity, the opposite is the case: Y is more sensitive than Q, and here the differential sensitivity may be important. One can note that Q is about twice as big as Y for values of f up to five. For $f = 20$, $Q = 1.43Y$. And, as an example of the differential size of the coefficients when f is less than unity: for $f = 0.25$, $Q = 1.8Y$. The largest difference we have is for $f = 0.12$ and for $f = 8.4$; in both these cases the difference is 0.3.

On the basis of this argument—that the differential sensitivity does not make much difference when f is close to unity, but often does when f is not close to unity—one should choose Y over Q.

However, if impression management is an important concern, use Q for the following reason: often the degree of association in sociological

data is not very high, and when it is not, Q is nearly twice as big as Y! On the other hand, this is a caveat to readers.

Finally, even though one may not have a full-fledged theory of the causal nature of the phenomenon under study, it seems that for most survey research two-way models are most appropriate. One would, for example, assume that being a Republican or Democrat will have opposite effects on presidential preference, rather than assuming that being a Republican has a causal effect whereas being a Democrat only contributes to random shocks.

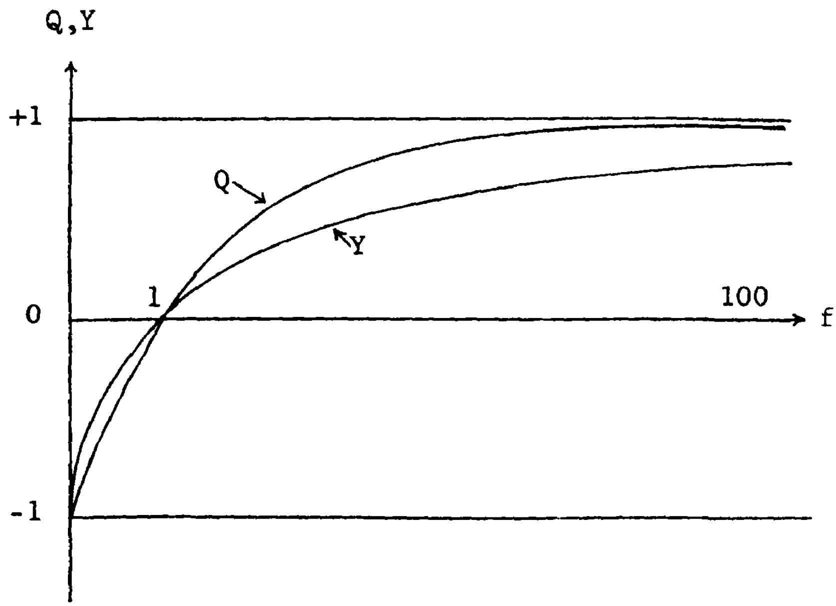


FIG. 6.—Heuristic graph of Q and Y as functions of f. The coefficient Q is more sensitive for values of f close to unity than is Y, while the opposite is the case the more f deviates from unity. Except when f equals zero, unity, or infinity, Q is always greater than Y.

In experimental research, on the other hand, when the treatment group and the control group are matched except on the experimental stimulus, a one-way model is probably most appropriate.

For sociological surveys, therefore, my personal bias is in favor of Y and ϕ. Together they give a measure of the degree of asymmetry in a table. The coefficient ϕ can be simply interpreted as a correlation coefficient Both Y and ϕ are more sensitive than Q for higher values of f (or smaller values when $f < 1$) where the differential sensitivity makes a difference. Finally, Y and ϕ seem more reasonable, since in much survey research two-way models are most appropriate.

CONCLUSION

In their two classic articles on measures of association for cross classifications, Goodman and Kruskal showed that the 2×2 variant of γ is Q, that of λ is Y, and that of τ_b is ϕ (Goodman and Kruskal 1954, 1959). Here we have given a causal interpretation of these same coefficients, and an interpretation of $h = \log f$. This was done in terms of the same general time-continuous Markov model in aggregate equilibrium, but with different decompositions of the transition rates. In addition to derivation from the same underlying model, the other main advantage of this approach is that measures obtained from cross-sectional and over-time data can be directly compared. Thus the Markovian approach proved useful for dichotomous variables; it can probably be taken for other cross classifications as well.

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Adolescent Achievement Behavior, Family Authority Structure, and Parental Socialization Practices[1]

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With data from 1,455 freshman males in seven urban and suburban, public and parochial high schools in the southern tier of New York, an empirical evaluation of four themes relating adolescent achievement (operationalized as level of educational expectation) to family structure and parental socialization rendered tenable the following propositions: (1) level of expectation varies positively with the frequency of several specified parental achievement training practices; (2) the frequency of such parental practices is not strongly associated with socioeconomic status; (3) a larger percentage of respondents reporting "democratic" authority relationships with their parents reported expectations of four or more years of college than did those reporting "autocratic" relationships with their parents; and (4) while the magnitude of the positive relationship between expectations and achievement training practices was attenuated in the autocratic vis-à-vis the democratic authority structure, that attenuation was restricted primarily to (*a*) those achievement training practices termed "Evaluations," (*b*) the father-son authority structure, and (*c*) the blue- but not the white-collar status category.

INTRODUCTION

That the family is a source of variation in adolescent achievement behavior[2] is a theorem derivable from some of the basic postulates of behavioral science. Among such postulates are those which assert that the nuclear family is *a* and perhaps *the* fundamental institution of socialization and that socialization during the first decade of life probably has greater impact on behavior than that which occurs subsequent to the onset of the second decade.

At a high level of abstraction, many would contend that adolescent achievement behavior is contingent upon family socialization practices. As the researcher moves to the more concrete levels of analysis, however, he

[1] The research reported herein was supported by an initial grant from the State University of New York Research Foundation (40-220-A) and a subsequent grant from the National Science Foundation (GS-1950).

[2] The term "behavior" is used throughout this paper in the general rather than in the restrictive sense, i.e., to connote "predispositions" to act or "attitudes" as well as acts (Sherif and Sherif 1956, p. 80).

begins to encounter what Goode (1964, p. 77) has termed "a mass of complex and sometimes conflicting evidence."

Specifying more precisely some of the conceptual and operational implications of the construct "achievement behavior," we adopt the definition of achievement behavior proposed by Crandall, Katovsky, and Preston (1960, p. 789): "Achievement behavior is behavior directed toward the attainment of approval or the avoidance of disapproval (the goal) for competence of performance (characteristic of the behavior) in situations where standards of excellence are applicable."

It is obvious that a diversity exists both in the conceptual and operational definitions of what, after Crandall et al., we have termed "achievement behaviors." Thus, Winterbottom (1958), McClelland (1961), and Rosen (1956, 1959, 1962, 1964) have used the TAT measure of *n*-achievement as their indicator of the construct; Morrow and Wilson (1961) have used scholastic performance; Dynes, Clarke, and Dinitz (1956) and Douvan and Adelson (1966) employed occupational goals as their indicator of the construct; and Elder (1962, 1963), and Bowerman and Elder (1964) have used educational goals as their measure of achievement behavior. With such heterogeneity of definition, it becomes crucial to inquire about the consistency among these various indicators. Pending a definitive study on this critical issue and being cognizant that Rosen found no significant association between dichotomized educational aspiration and *n*-achievement scores, we cite Brown's (1965, p. 441) summary of the various correlates of *n*-achievement: "These various results [from numerous empirical studies] generally conform to our prior conception of an achievement motive. People who have high scores [on measures of *n*-achievement] perform better in terms of long-term occupational and academic goals, and also do better on brief, immediate tasks when the reason for doing so is to satisfy some standard of excellence."

Returning now to what Goode has characterized as the "complex and sometimes conflicting evidence" on achievement behavior and parental socialization, we note that in his review of the literature, Scanzoni (1966) cites Dynes et al. (1956) to the effect that high levels of occupational aspirations are positively associated with *unsatisfactory* interpersonal relationships in the family Goode, writes Scanzoni, stresses the importance of a satisfactory mother-son tie, associating achievement behavior with a mother who is demanding, nurturant, trains for independence via permissiveness, and rewards achievement with affection. A slight variation on the Goode theme, says Scanzoni, is to be found in McClelland's (1961, p. 356) contention that, while maternal dominance may not interfere with high *n*-achievement, paternal dominance does; high *n*-achievement is fostered in the adolescent male by the absence of paternal dominance coupled with the presence of reasonably high standards of excellence and parental approval when the son attains such standards. Finally, Scanzoni interprets Bronfenbrenner (1961)

as suggesting that achievement is facilitated by a positive identification with the parent of the same sex. Thus, with Bronfenbrenner, Scanzoni comments that: "We have come full circle from the emphasis of Dynes *et al.* on rejection of *both* parents to a position in which identification with both parents, particularly the one of the same sex, is considered vital for achievement."

Perhaps it was such perceived circularity of the research literature, compounded with his own less-than-definitive empirical efforts, which led Scanzoni to refer to the literature on achievement behavior and the family as "inconclusive" (1966) and as lacking any meaningful relationships (1967).

While we agree with Scanzoni that the association between measures of adolescent achievement behavior and family influences have been generally low (r's of .30 or less), we would not characterize the literature as "inconclusive."

It is our contention that several consistent and comparatively "conclusive" relationships of adolescent achievement to family socialization practices can be identified in the works of Goode (1964), McClelland (1961), Winterbottom (1958), Child, Storm, and Veroff (1958), Rosen (1956, 1959, 1962, 1964), Rosen and D'Andrade (1959), Morrow and Wilson (1961), Douvan and Adelson (1966), Elder (1962, 1963) and Bowerman and Elder (1964).

Some Consistencies in Adolescent Achievement Behavior and Family Socialization

The first theme we have inferred from the literature is that particular parental socialization practices are associated with high levels of adolescent achievement. Rosen (1959) categorizes these as (1) achievement training, "getting the child to do things well"; and (2) independence training, "teaching him to do things on his own" (Rosen 1962, p. 612). Achievement training, according to Rosen, involves the parents (1) setting high goals for the child, (2) indicating a high evaluation of his competence to do a task well, and (3) imposing standards of excellence upon problem-solving tasks even in situations where such standards are not explicit. Independence training involves: (1) parental expectations that the child be self-reliant when competing with standards of excellence, and (2) granting the child autonomy in problem-solving and decision-making situations in which he has both freedom of action and responsibility for success or failure. Consistent with Rosen and D'Andrade (1959) and McClelland (1961), we believe that it is achievement more so than independence training which is associated with achievement behavior.

The second theme is that intrafamilial achievement socialization practices are more characteristic of middle- than of working-class families. Rosen (1962), for example, reports a slight tendency for upper- and middle-

class mothers to train their sons in achievement and independence earlier than lower-class mothers. Secord and Backman (1964, p. 569) in their summary of achievement behaviors and status have written: "Middle-class parents apparently place greater stress on independence training than lower-class parents. They are more likely to stress self-reliance, autonomy, and achievement in situations involving standards of excellence. They more often recognize and reward evidences of achievement, and they are more sensitive to and punitive toward failure."

The third theme is that parent-child relationships which permit the son to participate in the making of decisions which affect him ("democratic") are more conducive to achievement than according the son little if any opportunity to participate ("autocratic"). Thus, according to data we have recomputed, Bowerman and Elder (1964) found that 43 percent of their adolescent male sample expected to go to college when the respondents reported a "democratic" decision-making relationship with the father compared with 35 percent when they reported an "autocratic" relationship with the father. Their data also reveal that slightly more middle- than working-class fathers are reported as being "democratic." Somewhat similar data have been reported by Morrow and Wilson (1961, p. 508) in their study of intrafamilial determinants of academic performance. They observe that the parents of "Bright high-achievers reportedly engage in more sharing of activities, ideas, and confidences; are more approving and trusting, affectionate, and encouraging (but not pressuring) with respect to achievement; are less restrictive and severe; and enjoy more acceptance of parental standards by their youngsters."

Paternal authority structure and parental achievement and independence training practices have been found to be associated. Rosen (1962, pp. 623–24), for example, writes: "The authoritarian father, far from encouraging independence, tends to thwart his son's efforts to be self-reliant and autonomous. Nor is the father in this setting inclined to stress achievement training for his sons."

A fourth and final theme is that parental dominance of the male child is detrimental to achievement, while maternal dominance appears to have no such inhibitory effect. Rosen and D'Andrade (1959, p. 216) summarize this perspective based on their laboratory study of parent-child interactions: "Apparently, the boy can take and perhaps needs achievement training from both parents, but the effects of independence training and sanctions . . . are different depending upon whether they come from the father or the mother. In order for high *n*-achievement to develop, the boy appears to need more autonomy from his father than from his mother." Left unanswered by Rosen, however, is the question of whether the effect of a given level of achievement or independence training is attenuated in the paternal autocratic type of parent-child relationship.

In summary, then, while concurring with Scanzoni that intrafamilial socialization practices have not shown great explanatory power in accounting for adolescent achievement behavior, we affirm with Secord and Backman (1964, p. 568) that "there appears to be considerable agreement as to the child-rearing practices associated with high achievement."

Before stating our propositions linking achievement behavior with parental socialization practices, we want to emphasize that our indicator of achievement behavior is level of educational *expectation*, a measure of the realistic rather than the idealistic educational goal (or aspiration) of the adolescent (Rehberg 1967, pp. 81–90). We believe this measure to be congruent with Crandall's conceptual definition of achievement behavior inasmuch as an expectation to enroll in a four-year college involves the high school adolescent in a set of behaviors and attitudes "directed toward the attainment of approval . . . for competence of performance in situations where standards of excellence are applicable." The use of this indicator also permits comparison between our investigation and those of Bowerman and Elder, Dynes et al., and Douvan and Adelson, each of whom used an adolescent educational or occupational goal as a measure of achievement behavior. Finally, data from several previous studies provide evidence that the verbal expression of an educational goal is at least moderately predictive of actual post–high school educational behavior. For example, Sewell (1964) found that about 90 percent of those who expressed a college plan in high school actually enrolled in a four-year college following graduation. Sewell and Shah (1968) subsequently reported a correlation between college plans and college enrollment of .73. Alexander and Campbell's (1964) data show that at least 80 percent of their high school sample who said they planned to go to college were actually enrolled the year following graduation. Comparable results have been reported by Flanagan, et al. (1964) and by Berdie and Hood (1963).

Thus, with level of adolescent educational *expectation*[3] as an indicator of achievement, we hypothesize that:

1. The level of educational expectation varies positively with the reported frequency of each specified parental achievement training practice.
2. The level of educational expectation varies independently of the reported frequency of independence training practices.
3. The reported frequency of specified achievement and independence training practices conducive to college expectations varies positively with family social status.
4. The level of educational expectation is higher for respondents reporting a "democratic" parent-son authority relationship than for respondents reporting an "autocratic" relationship.

[3] The number of studies on adolescent career aspirations and expectations is too long to enumerate. For a rather comprehensive bibliography of these studies, see Kuvlesky and Ohlendorf (1965).

5. The relationship between level of educational expectation and specified achievement training practices is attenuated (*a*) under the "autocratic" compared with the "democratic" type of parent-son authority structure, and especially (*b*) under the *pat*ernal rather than the *mat*ernal "autocratic" parent-son authority relationship.

PROCEDURE

In the first of a three-wave longitudinal panel study of adolescent achievement, all the freshmen in the high school class of 1970 in seven urban and suburban, public and parochial, school systems in the southern tier region of New York State were surveyed in the spring of 1967.[4] Reflecting the region, approximately 98 percent were Caucasian. Approximately 90 percent of all rostered students were surveyed, but this paper reports analyses for males only.

Variables

Dependent.—After reading a descriptive paragraph differentiating between an *aspiration* and an *expectation*, and after responding to the educational aspiration item, the students were asked:[5] "Considering your abilities, grades, financial resources, etc., how far do you *actually* expect to go in school?" The eight response categories ranged from "tenth or eleventh grade" to "graduate or professional school" and were grouped and scored in accord with the seven-level educational scale from the Hollingshead (1957) Two Factor Index of Social Position.

Control.—Socioeconomic status is the primary control variable. In the correlational analyses, the entire seven-level range from the Hollingshead Two Factor Index is used. For the tabular analyses this scale has been dichotomized into white-collar (occupational levels 1–4) and blue-collar (levels 5–7). Measured intelligence has not been invoked as a control variable.[6]

[4] In New York State, where the minimum age at which an adolescent may leave school is sixteen, "dropouts" pose little threat to the representativeness of a freshmen sample.

[5] The response categories for this item were: (1) tenth or eleventh grade, (2) graduate from high school, (3) trade or technical school, (4) two-year business school, (5) nursing school, (6) two years of college, (7) four years of college, and (8) graduate or professional school.

[6] Measured intelligence has not been invoked as a control variable in this study for several reasons. First, although its association both with expectations and with status has long been established (Sewell, Haller, and Straus 1957; Sewell and Shah 1968), its association with our independent variables still remains a subject of continuing inquiry. With respect to parental authority structure, the data which do exist yield divergent and sometimes conflicting interpretations (see, e.g., the studies by Baldwin, Kalhorn, and Breese 1945; and by Drews and Teahan 1957). Second, to invoke IQ as a control variable would require either a tabular control which, when combined with the tabular control for status would yield cell *n*'s too small for reliable inferences, or correlational control which would,

Independent.—For the measurement of paternal and maternal authorit relationships, one item developed by Elder (1962, p. 244) was used, sepa rately for father and mother: "In general, how are most decisions betwee you and your *father/mother* made?"[7] Because we used tabular control fo status, the sample size did not warrant crossing the two levels of paterna authority structure ("democratic" and "autocratic") with the comparabl two levels of maternal authority; thus authority structure is considered fo each parent separately.

From the questionnaire items designed to operationalize Rosen's parenta achievement and independence training, we have, on the basis of thei verbal content, created three sets of items: (1) a Standards set, (2) a Evaluations set, and (3) an Independence set.

Standards: The five items which comprise this set indicate the degree t which the adolescent *perceives* (reports) his parents as having establishe high goals or Standards for him to attain. (See Rosen's [1962] first and thir criteria for achievement training as cited above.) These five items are mea sures of: (1 and 2) Paternal and maternal educational encouragement, tha is, the reported frequency with which the respondent is encouraged by hi father and by his mother beyond high school.[8] (3) Whether it is taken fo granted that the respondent will continue his education beyond hig

given the inconsistency in the studies relating IQ to such variables as parental authority structure, possibly obscure the basic relationships toward which this paper is primarily directed. Third, in much of the literature relating IQ to parental authority structure and parental socialization practices, IQ is positioned as the dependent variable, a positioning which would necessitate extending this paper inasmuch as we would be coping with two rather than with one dependent variable.

[7] For this item, the response categories ranged: (1) My father/mother usually doesn't care what I do. (2) I usually can do what I want regardless of what my father/mother thinks. (3) I usually can make my own decisions, but my father/mother would like for me to consider his/her opinion. (4) My opinions usually are as important as my father's/mother's in deciding what I should do. (5) I have considerable opportunity to make my own decisions, but my father/mother usually has the final word. (6) My father/mother listens to me, but usually he/she makes the decision. (7) My father/mother usually just tells me what to do. To enhance the stability of the data, we departed from Elder's (1962) classification of the categories by collapsing levels 1 and 2 into "laissez faire," 3, 4, and 5 into "democratic," and 6 and 7 into "autocratic." Responses to levels 1 and 2 have been eliminated from our analyses because the n of 52 (less than 4 percent of the sample) is too small to support reliably our multivariate procedures. In answering the two authority structure items (as well as all other items relating to a parent), respondents from homes broken by death, desertion, or divorce were asked to attempt the completion of the item by remembering how the parent had behaved when that parent was still part of the family. Respondents unable to do so were instructed to leave the item blank and were thus tabulated as "Nonresponses." The nonresponse rate to the paternal authority item was 5.9 percent; to the maternal authority item, it was 6.9 percent.

[8] The item read: "Which *one* of the following statements is most true about continuing your education after high school?" (1) my father/mother *never* urges me to continue my education; (2) . . . *sometimes* . . . ; (3) . . . *often* . . . ; (4) . . . *constantly*. . . .

school.[9] (4) Parental stress on the respondent's doing better than others.[10] (5) Parental stress on the respondent's winning in games and sports.[11]

Evaluations: The four items which comprise this set indicate the degree to which the adolescent reports his parents as positively evaluating his task performance. (See Rosen's [1962] second criterion for achievement training as cited previously in this paper.) These four items are measures of: (1) Frequency of parental reward for successful task performance.[12] (2 and 3) Frequency of paternal and maternal praise.[13] (4) Parental stress on pride.[14]

Independence: One item indicates the degree to which the adolescent perceives his parents as stressing that he be self-reliant and independent.[15] (See Rosen's [1962] first criterion for independence training as cited above.)

RESULTS

Educational Expectations and Selected Parental Achievement Practices

Table 1 provides the data pertinent to the hypotheses that level of educational expectation varies: (1) positively with the *reported* frequency of each parental achievement practice, and (2) independently of the reported stress on independence. Of the five Standards practices, three reveal moderately strong associations with educational expectations ("taken for granted," $r = .47$; "paternal educational encouragement," $r = .34$; "maternal educational encouragement," $r = .32$), while two exhibit significant but slight

[9] The item read: "Would you say that in your home it has been just about taken for granted that you will continue your education after you get out of high school?" (1) yes, (2) no, (3) do not know.

[10] The item read: "Generally, over the past 5–8 years or so, have your parents stressed or emphasized that you should try to do things better than anyone else?" (1) Yes, they have stressed it a lot; (2) Yes, . . . somewhat; (3) Yes, . . . seldom mentioned it; (4) They haven't said one way or the other; (5) No, they would rather I not try to do things better than other people.

[11] The item read: "Generally, over the past 5–8 years, have your parents stressed or emphasized that you should try to come out on top in games, sports, and the like?" Response categories were the same as for the previous item.

[12] The item read: "Generally, over the past 5–8 years, how often have your parents praised or rewarded you when you did something well?" (1) hardly at all, (2) sometimes, (3) fairly often, (4) very often, (5) almost every time.

[13] The items read: "How often does your father/mother give you praise, encouragement, or approval for what you do?" (1) almost never, (2) very seldom, (3) once in a while, (4) frequently, (5) very often.

[14] The item read: "Generally, over the past 5–8 years, have your parents stressed that you should take pride in things that you have done well?" Response categories were similar to those for the other "stress" items.

[15] The item read: "Generally, over the past 5–8 years, have your parents stressed or emphasized your being able to do things by yourself, like buying your own clothes, going places by yourself, etc.?" Response categories were similar to those for the other "stress" items.

TABLE 1

CORRELATION MATRIX: EDUCATIONAL EXPECTATIONS, SPECIFIED ACHIEVEMENT, AND INDEPENDENCE, TRAINING PRACTICES OF FATHER'S OCCUPATION

Variables	1	2	3	4	5	6	7	8	9	10	11	12
1. Father's occupation	1 00	.20	.13	11	.06	26	.12	17	.09	.04	.00	.41
2. Paternal educ. encour.		1 00	58	26	.21	26	.19	.35	.19	.26	.11	.34
3. Maternal educ. encour.			1.00	29	.18	.22	.23	27	.29	.30	.14	.32
3. Stress do better				1.00	38	.07	11	.17	.17	.30	.07	.11
5. Stress win games					1 00	.06	.09	.18	.11	.18	.18	.11
6. Taken for granted						1.00	.17	.20	.13	.05	.03	.47
7. Parental reward							1.00	54	.55	.29	.16	.23
8. Paternal praise								1.00	.46	.33	.19	26
9. Maternal praise									1.00	.33	.17	.16
10. Parental stress on pride										1.00	.19	.11
11. Parental stress on independ.											1.00	.05
12. Educ. expectations												1.00
Mean	3.9	2.0	2 1	2 6	3.0	1.6	3 0	2.7	2.5	2.1	2.8	2.6

NOTE.—With an N of 1,455, a correlation coefficient of .06 is significant at the .05 level, and a coefficient of .08 is significant at the .01 level. "Coefficients of correlation and t-ratios significant at the .05 level and at the .01 level for varying degrees of freedom" in J. P. Guilford (1965, pp. 580–81).

associations with the dependent variable ("stress on doing better . . . ," $r = .11$; "stress on winning . . . ," $r = .11$). For the four Evaluation practices, the associations with expectations vary from moderate to slight ("paternal praise," $r = .26$; "parental reward," $r = .23$; "maternal praise," $r = .16$; and "parental stress on pride," $r = .11$). With the exception of "parental stress on pride," each of the relationships remains significant when status is tabularly controlled.

Of the nine achievement practice correlations, the three with the highest degree of association with expectations (i.e., paternal and maternal educational encouragement and "taken for granted . . .") all contain direct references to the dependent variable, educational expectations. Interestingly, however, two of the Evaluation practices—paternal praise and parental reward—that display correlations with expectations of reasonable magnitude contain no direct reference to the verbal content of the dependent variable. Any subsequent research which uses educational expectations as a dependent variable, in addition to developing measures of achievement training practices which include direct reference to the dependent variable, should endeavor to develop measures of specific practices (especially of what we have termed "standards") which are free of direct references to the substance of the dependent variable.

With respect to educational expectations and independence training, the single correlation of .05 between expectations and parental stress on independence is not significant at the .05 level. This is consistent with the inference of Rosen and D'Andrade and McClelland that it is achievement rather than independence training that underlies adolescent achievement behavior.

Achievement and Independence Training Practices and Socioeconomic Status

Suggested by the work of Rosen and others and by the previously cited summary of Secord and Backman is the proposition that it is middle-class parents who engage more frequently in those socialization practices most conducive to achievement behavior. While providing support for the hypothesis, the data displayed in tables 1 and 2 fail to indicate that status is a major source of variation in parental training for achievement or independence. Table 2 reveals that, for the nine achievement and one independence practice, reported frequencies[16] are higher among respondents from white- than from blue-collar backgrounds, as shown by the differences between means. Table 1 reveals that these relationships between socializa-

[16] The means displayed in the tables are the arithmetic means of the distribution of the response levels to the particular item under analysis. As such, the mean provides a rough approximation of the frequency or stress for each achievement and independence training item. Prior to calculating the means and the correlation coefficients, all item scores were reflected so that a score of 1 was assigned to that level most conducive theoretically to high achievement behavior and a score of n to the level least conducive.

tion practices and status are moderate at best, the median r for the ten practices being .113. Seven of the achievement practice relationships are statistically significant, however, at or beyond the .05 level (Guilford 1965, p. 580).

Educational Expectations and Parental Authority Relationships

From previous literature which has suggested that achievement is facilitated when parents provide their offspring with an opportunity to direct their own behavior (and hindered when little if any such opportunity is provided), we hypothesized that a participative or "democratic" type of parental authority is more conducive to high educational goals than is a nonparticipative or "autocratic" type of authority.

TABLE 2

MEAN REPORTED FREQUENCIES OF SPECIFIED PARENTAL ACHIEVEMENT AND INDEPENDENCE TRAINING PRACTICE BY FATHER'S OCCUPATION

	Father's Occupation		
Practice	White Collar	Blue Collar	All
Standards:			
Paternal educational encouragement	1.91	2.21	2 02
Maternal educational encouragement	1.97	2.23	2 08
Taken for granted continue education	1.42	1 78	1 57
Stress on doing better than others	2 69	2.83	2 75
Stress on winning in games	2.97	3.04	2.99
Evaluations:			
Parental reward	2.93	3.19	3 03
Paternal praise	2.58	2.89	2 71
Maternal praise	2 37	2.58	2 45
Parental stress on pride	2 10	2 14	2 12
Independence:			
Stress on independence	2 78	2 83	2 80

Table 3 reveals that 57 percent of the respondents report college expectations under the "democratic," compared with 44 percent under the "autocratic," structure. (This 13 percentage-point difference compares with an 8-point difference reported by Bowerman and Elder.) When father's occupation is controlled, 69 percent of the respondents from "democratic," compared with 59 percent from "autocratic," paternal situations among white-collar families report college expectations; for the blue-collar families, the comparable percentages are 40 and 24. (The 10-point difference in the white-collar category compares with a 9-point difference reported by Bowerman and Elder, while the 16-point difference in the blue-collar category compares with a 7-point difference reported by Bowerman and Elder.) Similar results are produced by a comparison of mean educational expectation level

using the Hollingshead seven-category scale with 1 = postgraduate work, 4 = complete high school, and 5 = partial high school (see table 4).

With both percentage and mean difference modes of analysis, there are some differences between paternal and maternal authority structures, but their magnitude is not sufficient to warrant separate comment. Consequently, little support is found for the suggestion by Rosen and McClelland that a *pat*ernal autocratic relationship with the son is, *in and of itself*, detri-

TABLE 3

PERCENTAGE OF RESPONDENTS REPORTING COLLEGE EXPECTATIONS BY TYPE OF PARENTAL AUTHORITY RELATIONSHIP WITH FATHER'S OCCUPATION CONTROLLED

Father's Occupation	Parent	Authority Relationship (Type)		All
		Democratic	Autocratic	
White collar	Father	69 (569)	59 (197)	66 (766)
White collar	Mother	71 (524)	60 (222)	67 (746)
Blue collar	Father	40 (368)	24 (139)	36 (507)
Blue collar	Mother	35 (343)	24 (158)	32 (501)
All	Father	57 (937)	44 (336)	54 (1,273)
All	Mother	57 (867)	44 (380)	53 (1,247)

NOTE.—Excluded from analysis in the above table are respondents who failed to respond to the authority structure item and those whose responses were classified as "laissez faire" paternal or maternal authority structure.

TABLE 4

MEAN EDUCATIONAL EXPECTATION LEVEL BY TYPE OF PARENTAL AUTHORITY RELATIONSHIP WITH FATHER'S OCCUPATION CONTROLLED

Father's Occupation	Parent	Authority Relationship (Type)		All
		Democratic	Autocratic	
White collar	Father	2.21	2.41	2.26
White collar	Mother	2.18	2.41	2.25
Blue collar	Father	2.88	3.14	2.95
Blue collar	Mother	2.91	3.11	2.96
All	Father	2.47	2.71	2.53
All	Mother	2.47	2.70	2.52

mental to achievement behavior when compared with a *maternal* autocra relationship. Nevertheless, the data have reinforced the proposition tha democratic structure of parental authority is more conducive to achie ment behavior (at least as measured by educational expectations) than one of autocratic authority.

Achievement Training Practices and Parental Authority Structures

The research of Rosen and D'Andrade (1959) and Elder (1962) sugge that democratic and autocratic parents display similar expectations of sta dards of excellence, but democratic parents provide more frequent a positive evaluations when the adolescent has performed a task well; that in a sense, the democratic parent is "warmer."

Tables 5 and 6 relate achievement training practices and type of paren authority. Those data suggest that differences in achievement training b tween democratic and autocratic parents are more pronounced with respe to Evaluations than Standards. (Evidence for this inference appears in t mean differences and in the mean of the mean differences in achieveme training practice frequencies between democratic and autocratic authori structures.) Thus, the Evaluations section of those tables reveals a diffe ence of moderate (relative) magnitude between democratic and autocrat parents in the frequency with which they are reported as communicati positive evaluations for successful performance (mean of mean differenc indicates frequencies are .27 higher for paternal democratic than autocrat .32 higher for maternal democratic than autocratic).[17] Comparatively, refe ence to the Standards section of tables 5 and 6 indicates a small (relativ difference between democratic and autocratic parents in the frequency wi which they are reported as communicating standards of excellence (mean mean differences indicates frequencies are .06 higher for paternal democrat than autocratic, and .05 higher for maternal democratic than autocratic) control for father's occupation does not markedly alter this pattern.

[17] To ascertain whether the differences between the means of the mean differences f democratic and autocratic families could be an artifact of all four Evaluation scal having five response levels compared with only two Standard scales having five leve (two had four levels and one had three levels), the following procedure was employe Each mean for each practice for the two types of authority structure was converted to Z-score, i.e., $Z = (X = -U)/0_{\bar{X}}^{-}$, the algebraic difference between respective Z-scor was computed, and a mean of that difference was calculated for Standards and Evalua tions. For paternal authority structure, the mean Z difference between democratic an autocratic structures was 2.18 for Standards and 9.16 for Evaluations. For materna structure, the mean Z difference between democratic and autocratic structures was 2.0 for Standards and 10.77 for Evaluations. (We may thus infer that the mean difference are not artifactual products of the varying number of response categories.)

TABLE 5

MEAN REPORTED FREQUENCIES OF SPECIFIED ACHIEVEMENT TRAINING PRACTICES BY TYPE OF PATERNAL AUTHORITY RELATIONSHIP WITH FATHER'S OCCUPATION CONTROLLED

Achievement Training Practice	Father's Occupation								
	White Collar			Blue Collar			All		
	Authority Relationship			Authority Relationship			Authority Relationship		
	Democ.	Auto.	Democ. Minus Autoc.	Democ.	Autoc.	Democ. Minus Autoc.	Democ.	Autoc.	Democ. Minus Autoc.
Standards:									
Paternal educational encouragement	1 89	1.95	0 06	2 18	2 27	0 09	2 00	2.08	0.08
Maternal educational encouragement	1 98	1 96	−0.02	2 22	2 27	0.05	2.07	2.08	0.01
Taken for granted continue educ.	1.41	1 47	0 06	1.76	1 85	0 09	1.55	1.63	0.08
Stress on doing better than others	2.71	2 64	−0 07	2.83	2.82	−0.01	2.76	2.72	−0.04
Stress on winning in games	2 96	2 99	0 03	3.00	3 13	0.13	2.98	3.05	0.07
Mean of absolute mean differences	.	.	0 05	..	..	0.07	...	...	0.06
Evaluations:									
Parental reward	2 82	3 23	0 41	3 14	3.32	0 18	2.95	3.27	0.32
Paternal praise	2.45	2 95	0 50	2.81	3.11	0 30	2.59	3.02	0.43
Maternal praise	2 28	2 61	0 33	2 56	2.62	0.06	2.39	2.62	0.23
Parental stress on pride	2.07	2.20	0 13	2 14	2.15	0.01	2.09	2 18	0.09
Mean of absolute mean differences			0.34	...	...	0.14	..	..	0.27

TABLE 6

MEAN REPORTED FREQUENCIES OF SPECIFIED ACHIEVEMENT TRAINING PRACTICES BY TYPE OF MATERNAL AUTHORITY RELATIONSHIP WITH FATHER'S OCCUPATION CONTROLLED

Achievement Training Practices	Father's Occupation						All		
	White Collar			Blue Collar					
	Authority Relationship			Authority Relationship			Authority Relationship		
	Democ.	Autoc.	Democ. Minus Autoc.	Democ.	Autoc.	Democ. Minus Autoc.	Democ.	Autoc.	Democ. Minus Autoc.
Standards:									
Paternal educational encouragement	1.87	1.94	0.07	2.24	2.28	0.04	2.02	2.08	0.06
Maternal educational encouragement	1.97	1.95	−0.02	2.20	2.23	0.03	2.06	2.07	0.01
Taken for granted continue education	1.39	1.50	0.11	1 79	1.86	0.07	1.55	1.65	0.10
Stress on doing better than others	2.71	2.60	−0.11	2.82	2.78	−0.04	2.76	2.68	−0.08
Stress on winning games	2.99	3 00	0.01	3.06	3.02	−0.04	3.02	3.01	−0.01
Mean of absolute differences	...	...	0.06	...	...	0.04	...	...	0.05
Evaluations:									
Parental reward	2.79	3.20	0.41	3 08	3.45	0.37	2.90	3.30	0.40
Paternal praise	2.49	2.89	0.40	2.88	3.04	0.16	2.65	2.95	0.30
Maternal praise	2.22	2.64	0.42	2.42	2.86	0.44	2.30	2.73	0.43
Parental stress on pride	2.06	2.17	0.11	2.09	2.26	0.17	2.07	2.21	0.14
Mean of absolute differences	..	..	0.34	...	...	0.29	...	...	0.32

Educational Expectations and Achievement Practices as a Function of Parental Authority Structure

We now turn to our fourth and final theme, the relationship between expectations and achievement training practices within the two parental structures of authority.

We hypothesized that the relationship between level of educational expectation and achievement training is attenuated (*a*) under the "autocratic" compared with the "democratic" type of parent-son relationship, and (*b*) under the paternal "autocratic" compared with the maternal "autocratic" type of parent-son relationship. Adopting the arbitrary criterion of five correlation points in order for a difference between two Pearsonian coefficients to be considered at least minimally suggestive, we are able to infer the following patterns from the data.

Attenuation in the autocratic structure.—Without the tabular control for socioeconomic status, there appears to be no substantial or consistent support for the hypotheses that the relationship between expectations and achievement training practices is attenuated in the autocratic type of authority structure. The "All" column of table 7 shows that, while four of the relationships are attenuated in the autocratic paternal structure ("taken for granted," "parental reward," "paternal" praise, and "maternal" praise), one of the relationships is attenuated in the democratic rather than in the autocratic structure and four of the relationships essentially show no differences between the two types of authority structures. The "All" column of table 8 reveals only one relationship ("stress on doing better") where the correlation is five or more points lower in the autocratic maternal situation. Three of the relationships are attenuated in the democratic maternal situation, and five essentially show no difference between the two types of structures.

The differences which do exist are not *in*consistent with the theoretical perspective. The "All" column of table 7 indicates that three of the four relationships which are attenuated in the autocratic paternal structure are for associations between expectations and parental Evaluation variables. This is consistent with the inference from Rosen and D'Andrade's study to the effect that, while dominant fathers appeared to exhibit below-average warmth toward the son, dominant mothers appeared to exhibit above-average warmth. Correlative supporting evidence comes from tables 5 and 6, which show that the frequency of *mat*ernal praise under the autocratic *mat*ernal structure is higher (mean = 2.73) than the frequency of *pat*ernal praise under the autocratic *pat*ernal structure (mean = 3.02).

A control for socioeconomic status appears to add one more restriction to our just-stated conditional *post hoc* inference that the attenuation effect of an autocratic structure tends to be limited to Evaluation achievement prac-

TABLE 7

CORRELATION COEFFICIENTS: EDUCATIONAL EXPECTATIONS AND SPECIFIED ACHIEVEMENT TRAINING PRACTICES BY TYPE OF PATERNAL AUTHORITY RELATIONSHIP WITH FATHER'S OCCUPATION CONTROLLED

	Father's Occupation								
	White Collar			Blue Collar			All		
	Authority Relationship			Authority Relationship			Authority Relationship		
Achievement Training Practices	Democ.	Autoc.	All	Democ.	Autoc.	All	Democ.	Autoc.	All
Standards:									
Paternal educational encouragement	29	.35	31	26	.35	.29	.32	.39	.34
Maternal educational encouragement	26	27	26	.32	36	.33	.32	.35	.32
Taken for granted continue educ.	41*	31	.38	.49*	.36	46	.48*	.38	.47
Stress on doing better than others	10	17	11	13*	.05	.11	.12	.14	.11
Stress on winning in games	11	16	13	12*	.02	10	.12	.11	.11
Evaluations:									
Parental reward	23	23	23	.19*	.07	16	.24*	.16	.23
Paternal praise	18	.19	19	26*	11	23	.26*	.17	.25
Maternal praise	17	16	17	18*	−.04	.12	.21*	.07	.16
Paternal stress on pride	13	23	.16	10*	− 01	07	12	.11	.11
Minimum coefficient for significance at .05 level.	.09	.14	.06	10	.16	09	.06	.11	.06

* Variables for which the correlation between educational expectations and the specified achievement training practice is at least five points lower in the autocratic than in the democratic type of paternal authority structure.

TABLE 8

CORRELATION COEFFICIENTS: EDUCATIONAL EXPECTATIONS AND SPECIFIED ACHIEVEMENT TRAINING PRACTICES BY TYPE OF MATERNAL AUTHORITY RELATIONSHIP WITH FATHER'S OCCUPATION CONTROLLED

	Father's Occupation								
	White Collar			Blue Collar			All		
	Authority Relationship			Authority Relationship			Authority Relationship		
Achievement Training Practice	Democ.	Autoc	All	Democ.	Autoc.	All	Democ.	Autoc.	All
Standards:									
Paternal educational encouragement	27	.35	.31	29	.42	.29	.33	.42	.34
Maternal educational encouragement	26	24	26	28	.43	33	.30	.36	.32
Taken for granted continue educ.	39	39	38	.47	52	.46	47	.48	.47
Stress on doing better than others	12*	04	11	19*	06	.11	16*	.06	.11
Stress on winning in games	11	12	.13	10	21	10	.11	15	.11
Evaluations:									
Parental reward	21	28	.23	20*	12	16	24	24	.23
Paternal praise	17	25	19	30*	25	23	28	.26	.25
Maternal praise	17*	10	17	09	14	.12	.17	.14	.16
Parental stress on pride	11	17	16	06	17	.07	09	17	.11
Minimum coefficient for significance at 05 level	09	14	06	10	.16	09	.06	.11	.06

* Variables for which the correlation between educational expectations and the specified achievement training practice is at least five points lower in the autocratic than in the democratic type of maternal authority structure.

tices and operative primarily for the father-son relationship, namely, that this effect is characteristic of male adolescents from blue- but not from white-collar backgrounds. The status control columns of table 7 reveal, for white-collar adolescents, that of the nine achievement practices only one ("taken for granted") displays a lower correlation with expectations under the autocratic paternal situation. For blue-collar males, seven of the nine practices display lower correlations under the autocratic structure. While all four Evaluations practices are attenuated, the fact that three of the five Standards practices are also attenuated suggests that, for males from blue-collar backgrounds, an autocratic authority relationship with the father reduces the effect on achievement behavior primarily of Evaluation practices and, perhaps, of Standards practices.

Attenuation in the paternal "autocratic" and the maternal "autocratic" structures.—Without the tabular control for status, five of the nine correlations between educational expectations and the various achievement training practices are five or more points lower in the *pat*ernal than in the *mat*ernal autocratic parent-son structure (table 9). Four of these five are Evaluation practices. No similar contrast is evident between parents for the democratic parent-son relationship.

With the tabular control for status, the greater attenuation effect of the paternal over the maternal autocratic structure emerges, although it is conditioned by the status level of the adolescent's family, that is, the effect is considerably more prevalent among blue- than among white-collar males. Thus, in the autocratic columns of table 9, the correlations for eight of the nine practices are lower by at least five points in the blue-collar *pat*ernal autocratic compared with the blue-collar *mat*ernal autocratic structure. However, for white-collar males, only three of the nine coefficients are lower in the *pat*ernal situations. The data suggest, then, that, compared with a *mat*ernal autocratic parent-child authority structure, a *pat*ernal autocratic structure does indeed reduce the effectiveness of achievement training practices on achievement behavior primarily among male adolescents from blue-collar backgrounds.

SUMMARY AND CONCLUSIONS

This paper has represented an effort to subject to further empirical evaluation four themes relating adolescent educational expectations, as a measure of achievement behavior, to the intrafamilial variables of parental authority structure and achievement socialization practices.

The first theme was that expectations are contingent upon certain achievement training socialization practices but not upon independence practices. The data rendered this proposition tenable.

The second theme was that achievement practices conducive to a college

TABLE 9

CORRELATION COEFFICIENTS: EDUCATIONAL EXPECTATIONS AND SPECIFIED ACHIEVEMENT TRAINING PRACTICES BY TYPE OF PATERNAL AND MATERNAL AUTHORITY RELATIONSHIP WITH FATHER'S OCCUPATION CONTROLLED

ACHIEVEMENT TRAINING PRACTICE	Father's Occupation: White Collar — Authority Relationship				Blue Collar — Authority Relationship				All — Authority Relationship			
	Democratic Parent		Autocratic Parent		Democratic Parent		Autocratic Parent		Democratic Parent		Autocratic Parent	
	Mat.	Pat.	Mat.	Pat.	Mat.	Pat.	Mat.	Pat.	Mat.	Pat.	Mat.	Pat.
Standards:												
Paternal educ. encour.	.27	.29	35	.35	.29	.26	.42*	.35	.33	.32	.42	.39
Maternal educ. encour.	.26	.26	.24	.27	.28	.32	.43*	.36	.30	.32	.36	.35
Taken for granted	39	.41	.39*	.31	.47	49	.52*	.36	.47	.48	.48*	.38
Stress on doing better	12	10	04	.17	.19*	.13	.06	.05	.16*	.12	.06	.14
Stress on winning in games.	11	.11	12	.16	10	.12	21*	.02	.11	.12	.15	.11
Evaluations:												
Parental reward	21	.23	28*	.23	20	.19	.12*	.07	.24	.24	.24*	.16
Paternal praise	.17	.18	25*	19	.30	.26	.25*	.11	.28	.26	.26*	.17
Maternal praise	.17	.17	.10	16	.09	.18	.14*	−.04	.17	.21	.14*	.07
Parental stress on pride	11	.13	.17	23	.06	.10	.17*	−.01	.09	.12	.17*	.11
Minimum coefficient for significance at the 05 level	09	.09	.14	.14	.10	.10	.16	.16	.06	.06	.11	.11

* Variables for which the correlation between educational expectations and the specified achievement training practice is at least five points lower in the *paternal* than in the *maternal* autocratic structure.

expectation are more characteristic of middle- than of working-class families. While between-stratum differences in the direction hypothesized were found, their magnitudes were minor. Should subsequent research also fail to find substantial interstratum differences in such parental behaviors, revisions in related components of stratification theory would be in order.

Empirical support was also found for the third theme, namely, that a "democratic" or participative type of parent-son relationship is more conducive to achievement behavior than is an autocratic relationship. Pertinent to the second theme, our data revealed virtually no difference in the proportion of "autocratic" parent-child relationships in the white-collar category (26 percent) compared with the blue-collar category (27 percent). Support was also evident for the proposition that achievement training practices are more frequent in democratic than in autocratic families and that such differences are greater for Evaluations than for Standards practices.

Finally, our fourth theme involved the effect of parent-son authority structures on the strength of the relationship between achievement behavior and achievement training practices. The attenuation of the expectation–achievement training relationship as a function of authority structure, our data indicated, is apparent (*a*) primarily for those achievement practices we have termed "Evaluations," (*b*) under the paternal authority condition, and (*c*) for males of blue- rather than of white-collar background.

In conclusion, we believe that our data warrant qualified support for the statement by Secord and Backman that "there appears to be considerable agreement as to the child rearing practices associated with high achievement." Our qualification of this statement results primarily from the moderate to low degrees of association produced by this study for the expectation-achievement training practices and parental authority structure relationships. For, while this paper has provided additional empirical support for the linkage between achievement behavior and intrafamilial variables, the magnitudes of our measures of degree of association have led us to believe that there is more interfamilial variance in achievement behavior *un*accounted for than accounted for.

For an institution accorded the theoretical import which sociologists have accorded the nuclear family, this gap in accounted-for variance constitutes a challenge both to sociological theory and to sociological research.

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Commentary and Debate

PROBLEMS IN ANALYZING ELEMENTS OF MASS CULTURE: NOTES ON THE POPULAR SONG AND OTHER ARTISTIC PRODUCTIONS

James T. Carey's recent analysis of changing patterns in the popular song ("Changing Courtship Patterns in the Popular Song," *American Journal of Sociology* 74 [May]: 720–31) displays a problem long confronted by students of mass society: To what extent can cultural expressions be taken as valid indicators of social behavior or of shifting aspects of mood and national character? His analysis is admirable in that it replicates the earlier study of Horton. It is provocative in that it suggests what many sociologists now feel: that elements of rapid change now characterize the nation's youth. His remarks on the shifting character of the intimate relationship between 1955 and 1966 suggest that rules are being rewritten regarding the nature of the self and its affiliations with others.

Notwithstanding these features, I fear that Carey's analysis reveals a number of the problems inherent in any investigation that attempts to relate attitudes to behavior when no direct observation of the involved subjects is undertaken. In this brief note I should like to indicate four problems involved in analyzing aspects of popular culture, be this the study of popular songs, novels, paintings, or poetry. In the main, my remarks are directed to the tradition represented by Carey's work, and not to his study per se.

A fundamental problem in such studies stems from the long tradition that has regarded artistic productions as *social facts*. By regarding such productions as social facts, the analyst is relieved of the burden of demonstrating what meanings these productions have for the artist and his audience. It is too frequently assumed that such meanings can be identified by a capable analyst, independent of the interpretations brought to such works by the artist or his audience. In my judgment, artistic productions must be seen as *interactional* creations, the meanings of which arise out of the interactions directed to them by the artist and his audience. This is well seen in the long tradition of religious paintings which attempt to recreate the Crucifixion. Each century has produced its own meanings of this event, and these meanings are couched in different styles of dress, different gestures, and different symbols attached to the Christ figure. In no sense can the meaning of the event or the painting be judged independent of the meanings brought to it by the artist and his time.

If artistic productions are seen as interactional creations, a second problem must be recognized. A work of art may not evoke the same response in

the audience as in the artist. Camus realized this when he undertook his study of Kafka's works. Commenting on the problems of interpreting symbolic works, he stated (1960, p. 92): "Nothing is harder to understand than a symbolic work. A symbol always transcends the one who makes use of it and makes him say in reality more than he is aware of expressing." The meaning of a popular song, then, lies in the interactions brought to it. Its meaning resides only partly in the lyrics, the beat, or its mood.

This suggests that an art object, because it may not evoke the intended response in the audience, cannot be taken as an a priori valid indicator of a group's perspective. This is quite evident in popular music, where frequently listeners focus on the beat and not the words. Indeed, listeners to today's Top Ten songs are often unable to relate the content of the songs. As a consequence, the popularity of an art object may occur for reasons other than those directly extracted from its substantive content. There may be little correspondence between the intended and the imputed meanings. Objects of art often are collected for reasons of prestige, status, or self-enhancement.

An additional problem arises when it is realized that a great deal of what is important to a group may not be expressed in artistic form, or in aspects of popular culture. Just as languages often lag behind patterns of behavior (Polsky 1967, pp. 129–30), so too may aspects of popular culture. On other occasions such productions may anticipate perspectives which are as yet unclearly formed. The relevance in 1970 of the protest music of the early 1960s, best seen in Bob Dylan's lyrics, establishes this case. Negro blues, long the expressions of the suppression of blacks in America, have only recently been seen as indicators of the shifting nature of Negro culture. Similarly, the jazz musician has never been accorded the prestige, recognition, and wealth of the pop musician; yet his work embodies the same principles and activities. Art, then, cannot be taken, just as any symbolic representation cannot be taken, as a complete or unequivocally valid indicator of a group's way of life. At best such works must be seen as signals or cues to processes which must be examined in terms of other kinds of data (see Polsky 1967, p. 130).

Last, art objects and even the products of pop culture are valued by only a limited portion of any population. This is acutely the case with popular music. Youth from the lower classes may not have access to the channels of the airways, or their channels may be different—for example, country and western music as opposed to the modern urban lyric. On the other hand, the continued appearance of radio stations and recording companies catering to specific ethnic and nationality groups suggests that the popular song may portray only the white middle-class view of love or the intimate relationship. This is more evident in the "soul" stations, where an artistic tradition unknown to white youth is presented.

Analysts of mass culture must have evidence on the "attendance" rates and the "preference" patterns of the listeners and audiences to whom they wish to generalize. Such evidence has seldom been presented. Until such evidence is forthcoming, any formulations concerning shifts in national mood or character must be doubted.

Art as Interaction

The study of artistic productions must be returned to those situations where meaning is given those objects termed "art." This suggests a number of problems. The world of the artist must be penetrated. His circles of interaction and the meanings he attaches to his work must be identified. The triadic relationship of artist, critic, and public (so long taken as the paradigm of analysis) must be resolved into its constituent elements. Upon inspection, this relationship will be found to include diverse publics, organizations, groups, and friendships. It is here in the status and political battles between individuals that art takes on meaning.

The popularity assigned artistic productions might best be studied as *fashion*. Art, like social theories and popular styles of dress, is fashion (see Blumer 1969, pp. 275–91). The study of what becomes fashionable in the world of popular culture permits the sociologist to identify the special features of mass society—constant tensions between change and stability. Like all instances of fashion, elements of popular culture appear in those sectors of society characterized by rapid change. These are areas open to the continuous presentation of new modes of expression. Although the choice of selection from these modes is relatively free, it is by no means rational. Popularity and suitability are determined after the fact and only when old standards have been redefined or discarded in favor of new interpretations. It is one of the functions of the art critic to formalize, and hence rationalize, these standards of evaluation and selection. In the realm of popular music this function is *unequally* divided among disk jockeys, radio and television stations, public relations men, established artists, recording studios, and ultimately the giant recording industries. This suggests another aspect of popular culture: fashion is established by the declarations of prestige figures who exercise their power in the determination of what is fashionable. An essential aspect of popular music is the competition between these persons in power positions. It is they who give the interpretations and stamps of approval to the many new musical groups, film directors, poets, novelists, and song writers who are continually being formed and introduced through the media.

The *functions* of popular culture for society can be summarized as follows. The legitimation of an art object (or artist) at any point in time gives individuals a point around which social relationships and images of self can be built. One's identity is, in part, established by his location in the shifting

modalities of popular culture. One is "in" or "out" of fashion according to the actions he takes toward the legitimated features of his culture. Thus members of mass society must be constantly adding to their acquisitions of popular culture—an act which may go no further than the purchasing of every new record produced by a popular artist.

Fashion is an interactional production—it occurs only among and between interacting individuals. Study must be directed to those situations where fashion becomes legitimated. Such investigations can no longer proceed under the assumption that artistic productions are social facts independent of interacting individuals.

A last line of research can only be briefly indicated. This is to treat artistic productions as "sources of data" for the sociological analysis of human relationships. In this vein novels, poems, paintings, and popular songs can be taken as data representing one person's interpretation of some segment of social life. Theories of personality change could be tested against Conrad's *Lord Jim* and *Heart of Darkness*, much as Merrill (1961, pp. 446–53) treated Stendhal's *Le rouge et le noir* as evidence for a symbolic interactionist view of significant others.

Conclusion

Every social group, Robert E. Park suggested, ritualized certain artistic forms as expression of their dominant patterns of thought and action. These remarks have indicated how features of popular culture may be employed as indicators of behavior in mass societies. Several restrictions were offered. Art alone cannot establish the needed links between thoughts and actions. Other modes of observation must be adopted, as must a constant concern with the interpretations given those objects called art. If sociology is ever to realize a close correspondence between theory and social experience, the realities of social groups must be penetrated. This discussion has suggested how the study of art permits the entry into these groups and ultimately into the intricate fabrics of mass society.

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THE AUTHOR REPLIES

Professor Denzin's criticism of the content analysis of artistic productions is not a new one. Merton (1966) certainly felt compelled to go beyond the analysis of war bond drive appeals in the mid 1940s to ascertain audience reaction. Soon after Berelson's book (1952) appeared in the early 1950s, Cartwright (1953) raised the same points that Denzin does: that a thematic analysis of a particular cultural product cannot be used to infer characteristics of the producers of the content or the nature of the audience and the content's effects. I make this point only to indicate that investigators are not oblivious to these criticisms. Some wartime studies were utilized to infer the intentions and attitudes of communicators but only because it was difficult or impossible to ascertain them. Since there were no tests of validity reported, we do not have a good assessment of how successful these inferences as to intentions were. The question raised is whether it is worthwhile to delineate characteristics of a given content without at the same time trying to get at the intentions of the authors and audience reaction. I gather that Denzin's response would be "no." The endeavor would be worthwhile only if it were done prior to further analysis. But he does seem to feel that analysis of particular cultural products is valuable, since it allows replicability, comparisons over time. Both of these justifications are over and above any psychological satisfaction an investigator may experience because his feelings about what is happening with young people are confirmed by an analysis of popular lyrics.

I would agree with Denzin that it is not legitimate to study artistic productions as if they were social facts, legitimate indicators of social behavior. My own replication of Horton's earlier study treated the relationship of the belief system in popular songs to authors' intentions and audience reactions as hypothetical: "The fact that there is a distinctive set of beliefs associated with a large proportion of 1966 lyrics may reflect the growing disaffection among younger people who constitute the audience for the new lyrics, or it may simply reflect a change in those who write them" (Carey 1969*a*, p. 731).

I ended with the suggestion that several other areas be explored to ascertain the correspondence between communicators' intentions (or cause of content), values enshrined in lyrics, and the meanings that different publics impute to them.

Discussions with a number of rock musicians, as well as with articulate observers of the youth scene in and around the Bay area, as a substudy within a larger inquiry into drug use (Carey 1968), convinced me that there was a message being communicated. Printed interviews with musicians writing their own music which appeared in a number of publications were

combed for statements of what these musicians were trying to say. Knowledgeable informants who were rock musicians were asked to react to an analysis of lyric themes. A brief indication of the procedure I followed is described in a parallel article (Carey 1968*b*).

Horton's earlier article (1957) seemed to assume that the content he discussed reflected characteristics of the audience, possibly because the producers were, for some reason, attuned to their public. It seems to me that this assumption had little empirical justification in 1955 and has little today. Inferences about the nature of the audience are worthy of consideration only if direct observation of the audience is not possible. This is the point I made in looking at the theme of *autonomy* in the *Psychiatry* article. I stated there that it must be demonstrated that the lyrics are *listened to* and partly account for the popularity of the song. Several bits of evidence were marshalled to suggest that there was a link between the sentiments expressed in the lyrics and the sentiments of some young people. I discussed the relationship between what might be characterized as a "new bohemian movement" and rock and roll lyrics. Movement and lyrics seem to support each other. One of the unique characteristics of this movement is the fact that one of the methods that have evolved to disseminate its beliefs is the rock and roll lyrics themselves. The character of the communication, an underground poetry whose meanings are shielded from older persons and society in general, makes the task of ascertaining the meanings rebellious youth attach to it problematic.

I would suggest that it is in this context we should interpret Denzin's statement that "indeed, listeners to today's Top Ten songs are often unable to relate the content of the songs." Some of the lyrics seem to be obliterated by the sound so that even initiates need several hearings of an album, and there is much discussion of lyric meanings (is Paul McCartney really dead?). As Rossman has put it so cogently: "There's often a deliberate, artful fuzzing of words and sound effects, making the message deliberately hard to get or a cunningly embedded deeper layer of meaning under the surface texts. Some of this is gleeful mischief but more of it is akin to the subtleties learned by journalists, writers and artists of an occupied country or one under rigid, punitive censorship" (1969, p. 50).

If sociologists are identified with the occupying power vis-à-vis youth and other minorities, it may well be that we will be denied direct observation of specific situations in which younger people find themselves or honest reports about youth scenes. If that happens, or has already happened, we may be left with drawing inferences about them from a simple analysis of specific artistic productions. That would suggest that high on our list of priorities should be the development of more ingenious methods which will allow us to infer audience characteristics in the absence of direct testimony.

as well as an appropriate battery of unobtrusive measures to supplement or confirm our analyses.

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DUNCAN'S CORRECTIONS OF PUBLISHED TEXT OF "PEER INFLUENCES ON ASPIRATIONS: A REINTERPRETATION"[1]

Throughout the paper (*American Journal of Sociology* 74 [September 1968]: 119–37) the distinction between parameters of a model and estimates thereof, as derived from sample data, is blurred. Failure to keep the distinction explicit is responsible for a garbled account of the two-stage least-squares (2SLS) procedure as applied in connection with Models II and IV. The corrections to the text given below are intended only to rectify those misstatements that actually affected (albeit to a numerically negligible degree) the statistical results. For more adequate and rigorous treatments of the 2SLS method and simultaneous-equation models in general, the reader must refer to such works as those cited in footnote 10.

From line 6, left column, page 126, through line 32, right column, page 127, replace the published text with the following (but retain figure 2 as published).— In the presence of overidentification, we cannot proceed as before to translate the foregoing specification about the model directly into a set of equations for estimating the model's parameters from a set of sample data. If we were to require that all four predetermined variables be uncorrelated with each residual variable *in the sample data,* we would be led to an inconsistency. From the first equation of the model, for example, requiring $r_{au} = r_{cu} = r_{fu} = r_{du} = 0$ would imply that there are four equations (one each for r_{1a}, r_{1c}, r_{1f}, and r_{1d}) involving just three unknowns (p_{1a}, p_{1c}, and p_{13}). The solution obtained from any three of these equations will not, in general, satisfy the fourth. Indirect least squares, or the equivalent procedure described above, is not available as a method of estimation.

In this situation we derive a set of estimating equations that are implied by the econometrician's method of "two-stage least squares." (The proof of the equivalence of our procedure to 2SLS, though elementary, is omitted.) We begin by computing the "first-stage regression" of each dependent variable on all the predetermined variables, obtaining the regression equations:

$$\hat{Y}_1 = \beta_{1a.cfd}X_a + \beta_{1c.afd}X_c + \beta_{1f.acd}X_f + \beta_{1d.acf}X_d$$

and

$$\hat{Y}_3 = \beta_{3a.cfd}X_a + \beta_{3c.afd}X_c + \beta_{3f.acd}X_f + \beta_{3d.acf}X_d \,,$$

where the β-coefficients are the ordinary regression coefficients in standard form computed from the sample data. These β-coefficients are of interest in connection with the "reduced form" of the model, as is pointed out in a subsequent section of the paper; but their immediate use is the one noted in the next paragraph.

The 2SLS method entails the following restrictions on the correlations

[1] I am grateful to Arthur S. Goldberger for calling my attention to the errors noted herein. The co-authors of the paper are Archibald O. Haller and Alejandro Portes.

between predetermined variables and residuals *in the sample:* $r_{au} = r_{cu} = r_{fw} = r_{dw} = 0$; $\beta_{3f.acd}r_{fu} + \beta_{3d.acf}r_{du} = 0$; and $\beta_{1a.cfd}r_{aw} + \beta_{1c.afd}r_{cw} = 0$. Note that neither r_{fu} nor r_{du}, individually, is zero, but their weighted sum is forced to be zero, the weights being those that obtain as a consequence of the 2SLS method. A parallel statement holds for r_{aw} and r_{cw}.

Let us multiply through the first equation of Model II by each of the predetermined variables in turn. We obtain:

$$r_{1a} = p_{1a} + p_{1c}r_{ac} + p_{13}r_{3a} ,$$

$$r_{1c} = p_{1a}r_{ac} + p_{1c} + p_{13}r_{3c} ,$$

$$r_{1f} = p_{1a}r_{af} + p_{1c}r_{cf} + p_{13}r_{3f} + p_{1u}r_{fu} ,$$

$$r_{1d} = p_{1a}r_{ad} + p_{1c}r_{cd} + p_{13}r_{3d} + p_{1u}r_{du} .$$

Now, multiply the third of these equations by $\beta_{3f.acd}$ and the fourth by $\beta_{3d.acf}$ and add the two together. This yields (omitting the secondary subscripts of the β's)

$$\begin{aligned}\beta_{3f}r_{1f} + \beta_{3d}r_{1d} = p_{1a}(\beta_{3f}r_{af} + \beta_{3d}r_{ad}) \\ + p_{1c}(\beta_{3f}r_{cf} + \beta_{3d}r_{cd}) \\ + p_{13}(\beta_{3f}r_{3f} + \beta_{3d}r_{3d}) .\end{aligned}$$

We need not show the term $p_{1u}(\beta_{3f}r_{fu} + \beta_{3d}r_{du})$ on the right hand side, since it is zero, by the requirement stated above. We can similarly write the set of three estimating equations from the second equation of the model:

$$r_{3f} = p_{3d}r_{df} + p_{3f} + p_{31}r_{1f} ,$$

$$r_{3d} = p_{3d} + p_{3f}r_{df} + p_{31}r_{1d} ,$$

$$\begin{aligned}\beta_{1a}r_{3a} + \beta_{1c}r_{3c} = p_{3d}(\beta_{1a}r_{ad} + \beta_{1c}r_{cd}) \\ + p_{3f}(\beta_{1a}r_{af} + \beta_{1c}r_{cf}) \\ + p_{31}(\beta_{1a}r_{1a} + \beta_{1c}r_{1c}) .\end{aligned}$$

The solutions of the two sets of estimating equations are shown as the path coefficients in figure 2. The solutions for the residual paths (p_{1u} and p_{3w}) and for the correlation between residuals (r_{uw}) are obtained by a routine like that described in the previous section. The equations to be solved are the following:

$$r_{11} = 1 = p_{1a}r_{1a} + p_{1c}r_{1c} + p_{13}r_{13} + p_{1u}r_{1u} ,$$

$$r_{13} = p_{1a}r_{3a} + p_{1c}r_{3c} + p_{13} + p_{1u}r_{3u} ,$$

$$r_{33} = 1 = p_{3d}r_{3d} + p_{3f}r_{3f} + p_{31}r_{13} + p_{3w}r_{3w} ,$$

$$r_{13} = p_{3d}r_{1d} + p_{3f}r_{1f} + p_{31} + p_{3w}r_{1w} ,$$

$$r_{1u} = p_{13}r_{3u} + p_{1u}\,,$$

$$r_{3w} = p_{31}r_{1w} + p_{3w}\,,$$

$$r_{1w} = p_{1a}r_{aw} + p_{1c}r_{cw} + p_{13}r_{3w} + p_{1u}r_{uw}\,,$$

$$r_{3u} = p_{3d}r_{du} + p_{3f}r_{fu} + p_{31}r_{1u} + p_{3w}r_{uw}\,.$$

Note that the last two of these equations include the four nonzero correlations of predetermined variables with residuals. Their values are obtained from the respective estimating equations that contain them. For example, from the equation for r_{1f} given earlier, we obtain $r_{fu} = (r_{1f} - p_{1a}r_{af} - p_{1c}r_{cf} - p_{13}r_{3f})/p_{1u}$. From equations like these, we find

$$r_{fu} = .0665\,,$$

$$r_{du} = -.0340\,,$$

$$r_{aw} = -.0346\,,$$

$$r_{cu} = .0551\,.$$

These small values do not seriously call into question the assumption of the model that all the correlations between predetermined variables and disturbances *in the universe* are zero. No such assumption is made in regard to the correlation between disturbances, so that we are prepared to find that r_{uw} differs from zero. Nevertheless, the substantial negative correlation, $r_{uw} = -.48$, seems difficult to interpret in substantive terms.

If we neglect the correlations of predetermined variables with residuals, we can compute a set of "implied correlations" that depend only on the path coefficients and the intercorrelations of the predetermined variables. Deviations of the implied correlations from the corresponding observed correlations provide another perspective on the "goodness to fit" of the model. For the implied correlation, r'_{1f}, for example, we have $r'_{1f} = p_{1a}r_{af} + p_{1c}r_{cf} + p_{13}r_{3f}$. Shown below are the implied correlations that are not constrained to equal their observed counterparts.

$$r'_{1f} = .2371\ (-.0559)\,, \qquad r'_{3a} = .2876\ (.0278)\,,$$

$$r'_{1d} = .3281\ (.0286)\,, \qquad r'_{3c} = .2342\ (-.0444)\,.$$

Deviations from observed values are in parentheses. These deviations appear (with signs reversed) in the numerators of formulas of the type already illustrated for calculating the correlations of predetermined variables with sample residuals. Were these deviations to be sizable, we should be inclined to call the model into question.

From "As" in line 36, left column, page 132, through the end of page 132, replace the published text with the following.—The estimating equations are derived by multiplying through the last two equations of Model IV (those

involving G and H) by each of the six predetermined variables, imposing the following restrictions on the *sample* correlations between residuals and predetermined variables, in conformity with the 2SLS principle of estimation: $r_{bs} = r_{as} = r_{cs} = r_{fs} = r_{ct} = r_{ft} = r_{dt} = r_{et} = \beta_{Hd}r_{ds} + \beta_{He}r_{es} = \beta_{Gb}r_{bt} + \beta_{Ga}r_{at} = 0$. The solutions for the residual paths and for the nonzero correlations of predetermined variables and residuals are accomplished by the routine that was illustrated for Model II. We find

$$r_{ds} = .0291 \,,$$

$$r_{es} = -.0683 \,,$$

$$r_{bt} = -.0122 \,,$$

$$r_{at} = .0079 \,.$$

Neglecting these residual correlations, we have the following implied values for correlations that are not forced to equal their observed values (deviations from the latter are shown in parentheses):

$$r'_{Gd} = .3508 \; (-.0201) \,,$$

$$r'_{Ge} = .1397 \; (.0471) \,,$$

$$r'_{Hb} = .1293 \; (.0076) \,,$$

$$r'_{Ha} = .3383 \; (-.0049) \,.$$

None of these results casts doubt on the credibility of the model, which seems acceptable, moreover, in regard to the reasonable magnitudes of the path coefficients and the small size of the correlation between residuals ($r_{st} = -.074$, rather than $-.075$ as shown in fig. 5). We may, as a final indication of goodness of fit, compute all the correlations involving the aspiration variables that are implied by the path coefficients, neglecting correlations involving residuals (except for r_{st}). Typical formulas for this purpose are:

$$r'_{1a} = p_{1G}r_{Ga} \,,$$

$$r'_{1d} = p_{1G}r'_{Gd} \,,$$

$$r'_{14} = p_{1G}r_{GH}p_{4H} \,.$$

The implied correlations and their deviations from observed correlations are shown in table 2. The deviations of the implied from the observed correlations are [return to published text, p. 133].

Corrections to table 2.—Four lines in this table, as published, require minor corrections; the correct entries for these lines are as follows:

	Y_1	Y_2	Y_4	Y_3
X_b......	.2388 (.0251)	.2482 (−.0260)	.1104 (−.0020)	.0969 (.0130)
X_a......	.3997 (−.0108)	.4155 (.0112)	.2889 (−.0014)	.2537 (−.0061)
X_d......	.2719 (−.0276)	.2826 (−.0037)	.5447 (.0256)	.4783 (−.0214)
X_e......	.1083 (.0323)	.1126 (.0424)	.2524 (−.0260)	.2216 (.0228)

Other matters.—In figure 3, the residual for Y_1 should be labeled X_u rather than X. The term "block recursive," rather than "partially recursive," is used in recent econometric literature to describe models of the kind represented in this figure.

In personal communications and forthcoming publications, Arthur S. Goldberger and John P. Van de Geer have indicated that statistical procedures preferable to those described on page 131 are available for problems involving unmeasured variables (like G and H). Since those procedures were explicitly described (see p. *130*) as depending on "heuristic considerations," it was to be expected that improved procedures would be forthcoming.

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Book Reviews

The Sociology of Research. By Gunnar Boalt. Introduction by Alvin W. Gouldner. Carbondale: Southern Illinois University Press, 1969. Pp. xxxviii+166. $5.95.

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The title is too inclusive: this volume presents a moral philosophy for sociologists and outlines a program for research on sociological research, but it does not present systematic empirical data. Alvin Gouldner nicely summarizes in his twenty-page introduction:

> Sociologists have a special, scientific subculture into which they train and socialize their students. Boalt conceives of this culture as a set of regulative ideals concerning research, and indeed much of the discussion in his monograph entails an effort to explicate them systematically: these comprise, for instance, the formulation of the intellectual problem and hypotheses concerning it, securing an appropriate sample, measurement techniques, etc. The decisive consideration for Boalt, however, is that no one can fulfill all of these values in his own research. In some ways and in some degree, even the most talented and mature of scientists . . . will always fail. All social scientists, therefore, must learn to cope with failure. The problem of adapting to failure is the pivotal problem in Boalt's entire theory, while the centrality of failure is, perhaps, the pivotal "personal reality." . . . It is the inescapability and universality of failure . . . to which Boalt is drawn with humane fascination. Boalt's sociology of social research is therefore directly expressive of a tragic vision.

Gouldner elaborates the significance of such a tragic vision for American sociologists. He also suggests how Swedish sociology, and this work in particular, may be expressions of the character of Swedish culture. Both the introduction and the larger monograph also include valuable ideas about how different forms of university organization may affect the character of research.

Possibly Boalt would dispute the characterization of his book as moral philosophy in part, but, as Gouldner notes, the rules of methodology are always a morality. As moral philosophy, it strikes me as the kind Spinoza would have written if his mathematical background had been in modern statistics instead of Euclidean geometry. Values are related not by geometrical implication but by correlation, and there are numerous references to possible factor analyses of correlated value measures. One's reaction to the approach may be like one's reaction to Spinoza. To me it seems formalistic and a bit rigid, perhaps likely to lead to ritualism in research.

The most valuable aspect of the proposed research program is the emphasis upon plural values in research. These values may exhibit a unified pattern, for example, "in a matrix of correlations between values and/or behaviors as positive correlations between all the variables"; or they may exhibit a compensation pattern, where clusters of positively correlated value variables "have negative correlations with other variables in other clusters" and thus are able to compensate them. Compensation patterns may exist at various levels, and numerous hypotheses are advanced about the conditions likely to give rise to them—within research projects, within individual careers, within university departments, and among departments. The discussion of these hypotheses entails consideration of such phenomena

as role conflicts, democratic and authoritarian patterns in university departments, and relations between departments and other organizations.

Ethics, Politics, and Social Research. Edited by Gideon Sjoberg. Cambridge, Mass.: Schenkman Publishing Co., 1967. Pp. xvii+338. $8.95.

Albert Biderman

Bureau of Social Science Research

At the moment of writing, votes are being counted in yet another American Sociological Association referendum on yet another proposed set of ethical principles for sociologists. The volume organized by Sjoberg on *Ethics, Politics, and Social Research* attends to many of the knotty problems and conflicting principles that for years have confounded efforts to produce an ethical code which could gain broad approval in the profession. (The very idea of a collectively imposed code of ethics is a subject of ethical controversy.) The Sjoberg book reflects a much altered context in which questions of ethics now receive the attention of social scientists, however. It may be influential itself in its objective of further altering and broadening this context.

First of all, as the title denotes, ethics in social research is more closely and explicitly linked to politics. Second, preoccupations of social scientists shifted during the sixties from problems of securing professional acceptance and sustenance for sociological work to those of reconciling work with all manner of intellectual, human, and ideological values. Third, as the social sciences have become larger, more important, and more elaborate forms of social activity, they have become more fitting objects for social scientific study. Sjoberg has been a particularly vigorous advocate of the need for the social sciences to be informed and guided by a sociology of knowledge—sound methodology, he believes, must rest as much on consideration of social principles as those of logic, mensuration, or whatever else is ordinarily thought of as "method."

The editor modified his original plan for a book exclusively of original case studies showing how ethical and political influences affected the conduct and the end product of a research project. Ten of the fourteen essays, however, do have this form. Most of them are autobiographical. Joan Moore writes on avoiding getting coopted oneself while coopting sensitive and competing organizations for a mammoth study of Mexican-Americans. F. H. Goldner tells of feeling one's way through the ambiguous role possibilities open to a social researcher within a large business firm. Arlene Daniels bares the put downs of a female sociologist studying the alien world of military officers. R. A. Brymer and B. Farris, discussing an observational study of delinquents, worry about how to have entrée and honor in the group while avoiding direct participation in crime. (They opted for a cover story nobody believed and for scrapping confidentiality when potential misprision of homicide was at stake.) I. L. Horowitz appraises the "social as well as personal motivations" which led to his *Revolution in Brazil* being a book he lauds as revolutionary in several senses. R. Colvard uses extensive direct quotes from his correspondence to detail his fight for the right to preserve "the distinctive [and pejorative] imagery" conveyed by direct

quotes from identifiable informants in his book on a large teacher education program. (His philosophical generalizations from this case include an unusually stirring plea for *argumentum ad hominem* in social science.) P. L. van den Berghe, who writes on doing research in South Africa while hating and bucking *apartheid*, would have had a hard time following Colvard's advice that "the researcher try as best he can to consider himself at least a temporary member of his subjects' moral community, whatever the values may be" (p. 354). Nor could van den Berghe take it as an ethical fault that his treading on local political toes would make it difficult or impossible for other social scientists to do work in South Africa.

The latter dictum figures in Sjoberg's chapter on Project Camelot. His is one of four nonparticipant project case studies in the book—each on a project whose troubles made headlines. Actually, while the other three essays qualify as case studies, Sjoberg's is mostly a collection of pro and con quotations on the project plus some of his own reflections on the virtues of insulating social research from the "administrative control sector."

By contrast with the autobiographical writing in this book, the remaining three case studies suggest that sociologists can be most illuminating about social research as an object of study when they approach their task—as they have been trained to do—with some detachment as well as with a coherent analytical framework. L. D. Cain, Jr., reveals how ineffectual organized social science is in combating bad research and the political abuse of data. He doubts that even such ineffectual efforts as occurred in the case he analyzed—the "Profile of Aging" study used by the AMA to fight off federal medicare for the aged—would be engendered by abuses, however bad, where they are supportive of liberal rather than right-wing causes. The linkage of social science to social movements, even lovable ones such as gerontology, he regards as a major source of this weakness.

J. K. Benson and J. O. Smith analyze the controversy concerning the use of student subjects in the drug "nonresearch" for which Leary and Alpert were tossed out of Harvard. With no generally accepted standards existing for weighing the potential value of research to society against risks to subjects, they conclude that these social and individual interests are defended only to the extent that they coincide with the mandates of powerful interest groups and organizations; in this case, medical, legal, and academic ones.

In the Wichita "jury-bugging" case as analyzed by T. R. Vaughan, clear ethical conflicts between scientific and other values existed. In the ensuing political controversy, he finds, confronting these conflicts was assiduously avoided.

Of the three essays which depart from the case approach, one by T. N. Madan on political and ethical problems experienced by Indian sociologists is the sole survivor of Sjoberg's efforts to have several contributions from foreign scholars. Perhaps, like Madan's, they would have given American social scientists cause to count their blessings.

A cursory but sharp-eyed tour of Grantsville and Contractown is offered by H. Orlans. By expediently postulating that research sponsors are not necessarily knaves or fools, he offers investigators some advice on confronting ethical problems arising from their relations to money and its sources. Neither the charm nor value of Orlans's maxims are minimized by the fact that they can be reduced to such everyday ethical verities as "Thou shalt not lie," "Thou shalt not steal," and "You should have thought about that before you got yourself into this trouble."

Jane Cassel's record informs us that pressure groups often try to push researchers around, that research institutes are the kinds of vulnerable organizations which will yield to such pressure, and that these institutes tend to recruit marginal types of professionals who will be especially "uneasy in controversy and accommodative of pressure." She deplores the institutionalization of research and preaches a university academician's version of rugged individualism as an antidote to its evils.

The authors are concerned with the relations of social research to power, particularly its own power to affect the lives of others. Social research was shielded from many of the ethical and political problems discussed here because the activities of social scientists were for long so insignificant—you don't have to worry about whom you hurt or help so long as you aren't hurting or helping anyone to any degree. An objective of some of the contributors is to attack devices which attempt to preserve the moral and political virtue of social science by insuring that it remains inconsequential.

Many of the problems discussed here, however, exist because of the continued low regard of the social scientist for the significance of his work. He *does not see his work as having sufficient importance for its* demands to take precedence over other interests and values—over either his own nonprofessional purposes or the immediate interests of other parties. In part, this attitude derives from an individualistic bias—a bias found in both the analytic and the normative perspectives of many of the contributors. They tend to identify themselves with individuals and their purposes and to dislike organizations and collective purposes, particularly big organizations and most particularly the biggest of all, the nation state. Unlike the professional who dispenses services, the social scientist himself is engaged in an activity which has value significance largely at a collective rather than an individual level. Where social scientists have hardly more conviction or clarity than anyone else regarding the societal significance of social scientific knowledge, they have a weak foundation for a disciplined approach to the ethics and politics of research, either as objects of their sociological analysis or their social behavior.

Technocracy. By Jean Meynaud. Translated from the French by Paul Barnes. New York: Free Press, 1969. Pp. 315. $12.95.

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Jean Meynaud's *Technocracy*, first published in France in 1964, now available in an English edition, makes available to American students of politics a substantial contribution to understanding the problems which emerge from the relationship of specialized knowledge to the decisions of government. Policy makers are increasingly dependent on the information and analysis they receive from specialists, who are generally motivated by the requirements of reason and a preference for efficacy. Meynaud neither extols the rationality and efficiency of technocracy nor does he characterize these tendencies as mindless, heartless, or purposeless. He recognizes rationality and efficiency as important factors in modern government and argues that the problem is not to reject them but to control them through democratic

processes. The problem of technocracy is the problem of representative government.

Meynaud's book is, in many ways, more pertinent today than it was when it was first published. During the past three years, there has been a wave of rebellion, principally among the young, that has, in large part, been directed against the technocratic trends that Meynaud discusses. When he was first writing his book, in the early 1960s, government by specialists seemed to be gaining momentum in the United States and also in France and Great Britain which are the main sources of Meynaud's illustrations. By the end of the decade, this same movement came under attack for what were deemed its mistakes, its support for the existing power structure, and its repression of legitimate demands for social change. In the long run, it is possible that the momentum behind rationality and efficiency in government will prove more persistent than the impetus from the student revolts; but there is no doubt that these revolts dramatized the limits of rationality and efficiency in a way that no scholarly analysis, like Meynaud's, could do. But where revolt and rebellion bring heat, a book like *Technocracy* brings the kind of careful reflection we need.

Meynaud's description of "technocracy," for example, is different from either Burnham's idea of a "managerial class," Mills's notion of a "power elite," or any crude allusion to a conspiracy among corrupted intellectuals. He opts for Aron's pluralist concept of "*catégories dirigeantes*," groups of specialists who might share a propensity toward reason and efficiency but who might differ substantially in orientation, in value preference, and in their interpretation of facts and evidence. Indeed, one of the most interesting sections of Meynaud's book is his discussion of the limits of intervention and influence in political decision making that results from differences among experts. Specialists do not necessarily agree; most especially in cases where the data are incomplete, theories are still partially hypothetical, and their powers of prediction are thus weakened. There are obviously some things that scientists and other experts, given their training, will agree upon, certain evidence and questions that conform to the rigorous standards of their disciplines or professions. But we know that this agreement can easily disappear once the basic data have to be projected in trying to decide questions of new military-weapons systems, fiscal or monetary policies, or public regulation of resource development. The idea of a technocratic "conspiracy" seems difficult to imagine.

But the idea of technocratic support for the existing order is another matter entirely, and this issue receives less attention from Meynaud than it might have. His attention is largely drawn to the role of specialists in government decision making and to their control through executive administration, legislative influence, and, less so, through the informed intervention of political parties, interest groups, and public opinion. When these key forces in the political process move in harmony, their essential control over the sources of knowledge in the society provides them with powerful backing for maintaining the status quo. At the same time, the very control over expertise by dominant majorities can deprive minority groups of the same specialized knowledge that they need to bolster their own effectiveness in gaining political power. Meynaud poses the issue of democratic control over expertise. By the same token, *access* to expertise by all groups in the society, both majorities and minorities, seems no less a crucial issue for

democracy, an issue that raises question of both intellectual freedom and the role of intellectuals in politics. For without access to specialized knowledge, minorities could, through frustration and a dreadful feeling of impotence, be driven to try to destroy a system of rational decision making and, in the process, either create chaos or provoke an irrational period of repression.

Violent Men—an Inquiry into the Psychology of Violence. By Hans Toch. Chicago: Aldine Publishing Co., 1969. Pp. xvii+268. $7.50.

Terror and Resistance: A Study of Political Violence, with Case Studies of Some Primitive African Communities. By Eugene Victor Walter. New York: Oxford University Press, 1969. Pp. xii+385. $8.50.

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Violence is both in the limelight of public interest and the social scientist's concern, and the number and variety of new materials becoming available on the subject is staggering. The definitive task of bringing order into the accumulation of facts, opinions, theories, and commentaries will have to wait for some filtering and concentration. Both books reviewed deserve immediate attention; they are rich in heuristic and practical implications.

Their inclusion under a single review, suggested by the *American Journal of Sociology* book-review editor, testifies to the interdisciplinarity of the concept of violence and of the research efforts in this area. The overriding theme of violent behavior encompasses police incidents, inmates' behavior in correctional institutions, street gang's way of life, and African governmental and tribal politics. The fact that no overall solution emerges from these writings, as from the many others that come across our desks, is testimony to the complexity of the problem.

Professor Hans Toch summarizes a number of studies carried out in the California Department of Corrections. He focuses on violence as a form of social conduct, bypassing the low-yield approach of psychometric analyses of groups of violent subjects. Through detailed interviews, conducted by researchers who belong to the same milieu as the respondents and who could thus be identified as peers by them, a step-by-step accounting of violent incidents was collected. The interview data were subjected to close scrutiny (with inevitable intuitive overtones) to detect similarities and relevant cues which could lead to the formulation of causal explanations and of meaningful inferences on the interviewee's social orientation and interpersonal interaction. The number of subjects is small (e.g., seventy-one in the inmate and parolee group), and the entire research approach would have benefited from correlational analyses with personality variables and with objective indicators from the violent behavior of the subjects and their life history. A typology is built on the basis of the available data, including ten categories meant to identify subjects characterized by ways of relating to people which have a high probability of leading to aggressive contacts. The ten categories are grouped under two main headings: (*a*) self-preserving strategies, and (*b*) self-centered persons viewing other people as objects. The

value of the typology, of course, will have to be tested by replications and by cross-cultural transferability. A small-scale reliability test conducted by the author is not too encouraging. From his analyses of the chain of interactions between aggressors and victims, Toch moves to implications for therapy. He suggests a differential strategy of change, aimed at different groups of homogeneous violent offenders, and favors an educational-retraining approach making use of possible positive elements of violence proneness. Again, this must be evaluated against a reality testing, which remains to be done. The main value of the book is that of a program for possible research projects and approaches.

Walter deals with a different facet of the problem of violence: organized terror, the regime of terror, studied in a historical and political science perspective in some primitive African societies. His conceptual tools are different, but striking parallels emerge. For example, the relationship between the subjects of terrorism and its applicants is not alien to the victim-offenders relationship which Toch explores. Walter analyzes several primitive societies in West and Central Africa south of the Sahara, although the Zulus are the main object of his concern. He clearly distinguishes between the process of terror and its institutional and systematic characteristics. Of course, recent political events will provide the political analyses of the future with many replication case studies, perhaps too close to us for comfortable and detached comparative appraisal. We may hope for some cross-cultural testing of Walter's hypotheses.

Turmoil and Transition: Higher Education and Student Politics in India. Edited by Philip G. Altbach. New York: Basic Books, 1969. Pp. viii+267. $7.50.

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This is the first book to give detailed attention to student unrest in India. It provides an important link in the study of student movements on a world-wide comparative basis and an insight into the special problem of student politics and higher education in underdeveloped countries. (India has the third highest student population in the world after America and Russia.) It covers general aspects of the problem—the historical background, student-faculty relations, the political factor, the nature of Indian universities (curricula, recruitment, and organization)—and it illustrates these themes by means of particular case studies. In so doing it offers a broad perspective on Indian society, its British background, and its unsteady but genuine democracy. Those who want a swift guide into this range of issues could hardly do better than sample the overview provided here by Edward Shils and his article on Indian students, together with the excellent historical survey provided by Philip Altbach, and the cogent comparison with the American academic milieu contributed by Joseph Gusfield. Indeed, there is quite a lot to be said for tackling the book in this way since its main drawback is its repetitiveness.

The overall picture provided of Indian higher education is not entirely a happy one. One derives an image of universities infiltrated by politics and patronage, staffed by a depressed profession of clerks who teach overmany students by rote methods at dictation speed. Indian universities originally reproduced the pattern of the University of London, but without its flexibility, and too often without its high standards. The best textbooks are all in English, a language which, because of the postindependence promotion of Hindi, few understand adequately. Many students are rebels without a cause insofar as the overriding and unifying emotions of nationalism, which gathered force between 1920 and 1942, no longer provide ideological cement. In another sense they are rebels with too many causes, from language agitations, to attacks on corrupt regional administrations, to campaigns to get grades revised and thus allow a higher proportion of students through. Two of the main differences between the Indian and the American situation are that the Indian students lack an adolescent subculture while the teachers lack a firm academic subculture. The students, particularly those in law faculties and liberal arts colleges, look forward to inadequate employment opportunities, and the teachers have to accept very poor remuneration. Neither students nor teachers have a work ethic of the American type nor a full sense of the academic vocation.

Of course there are exceptions. Students at the technological institutions, as in most other countries, are less inclined to indiscipline and (in this unlike Britain at least) are recruited from upper-class families. On the other hand, there are some instances of upper-class students browbeating faculty, who are afraid that disturbances will jeopardize their position with the political authorities. The missionary colleges are exceptional in their academic excellence, moral integrity, and firm discipline. Calcutta provides another exception insofar as the motivations are derived from a strongly and persistently politicized milieu.

What emerges from the analysis is the impact of contrasts. Indian students are quite highly secularized (except in their sense of familial obligation) as well as permeated by liberal values, but they live in a society where hierarchy is still important and nepotism widespread. Ascription and achievement orientations are in sharp and visible opposition. In such a situation authority is no longer certain of itself. On the one hand, as Edward Shils puts it, is "the family system, with its preponderance of elders; the choicelessness of the major spheres of life (i.e., marriage and vocation); the hierarchical system of education" and, on the other hand, is an "authority which—out of principled liberalism, internal division, fear or incompetence, or a mixture of all these—is unable or unwilling to impose itself" (p. 89). Here one begins to recognize some familiar features: the pattern of initial resistance followed by rapid collapse and the syndrome of personal politeness on the part of students, complemented by a ferocious mendacity of utterance in what Joseph Gusfield calls "the adolescent pack." Violence is endemic, a fact which will surprise those who believe India is a paradigm of nonviolent methods.

This is an excellent compilation, well planned, reasonably comprehensive, easy to read—and while critical of the Indian situation, is motivated by goodwill and sympathy toward Indian culture.

Becoming Deviant. By David Matza. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969. Pp. ix+203. $5.95.

Deviance and Identity. By John Lofland. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1969. Pp. xx+330. $4.95.

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Both of these books belong to a current and dominant trend in modern sociology which places deviance in its natural and total cultural context. David Matza, for example, begins his book on the process of becoming deviant with a chapter on natural deviation, as he calls it, from a phenomenological point of view. When he turns to deviance, he tries to understand it in all its forms as an outgrowth of the kind of society we have. Those of us who remember the old-style texts on social problems, or social pathology as it was once called, know that the earlier views of the hobo, the prostitute, or the mentally ill began with some imaginative and unitary concept of society—decidedly middle class and establishment from top to bottom—and then went on to tell us about those who did not adhere to these supposed statistical norms. Instead, Matza will begin his account of homeless men with the famous Nels Anderson book (*The Hobo* [Chicago: University of Chicago Press, 1923]), which takes us into the subjective world and the objective circumstances surrounding the hobo. He refers to this as a naturalistic perspective on deviant phenomena. If I were to add an account of mental disturbance, since I agree with Matza's approach, I should be quick to point out that according to the Midtown Manhattan Mental Health Research Study, of which I was a principal investigator, the statistical means and modes of mental health in New York City in the decade of the 1950s did not disclose a picture of mental health for the American in New York City, but rather pointed to a range of disturbance linked to cultural and socioeconomic variables. Matza is right in pointing out that such pathologies and diversity characterize the work of the Chicago school in their studies of hobohemia, crime, and delinquency, and he sides with Howard Becker, likewise, in a functional view as well as with Erving Goffman, who expanded such notions of deviant behavior as being real and significant parts of social existence.

David Matza also adds a contemporary neo-Chicagoan approach and introduces certain novel concepts like affinity, affiliation, and signification to expand upon this school. The first term, affinity, stresses environmental circumstances. I have used such a conception for a long time and called it "the conditions under which the cultural or subcultural group functions or operates." These are, of course, cultural conditions of existence. What then is affiliation? In general, Matza claims that it rests upon a kind of social contagion or epidemiology. In this sense, becoming deviant means being converted. Again, Howard Becker in his studies of "outsiders" or the induction of marihuana users furnishes a guide in which the subject's predisposition and willingness to follow a course of action are taken just simply as his expected intention or his conscious choice. Here I have a little more difficulty as a social and cultural determinist; what I am mainly

worried about is that there is a little too much flirting here with "free will" and assumptions about "open" psychological choices. Granted that it is always ultimately human individuals who think, react, hope, and aspire, or in essence make choices, I doubt that unbridled free will is exemplified. The Becker account of induction into marihuana use could be amplified by noting how much social and behavioral conditioning goes on in *our* drug culture with its TV cures for any unwanted variations in mood, comfort, or desirability. When it is remembered that marihuana use is mainly an age-linked phenomenon in parts of our society, a case is obvious that cultural evolution and, indeed, different cultural settings for different age groups are a mark of our modern tempo of cultural evolution.

Matza's discussion of signification uses the metaphor of Leviathan, which I have dealt with simply as the greater weight and repetition of milieu over individual behavior. For sheer bulk, Leviathan is not a bad metaphor, but after all, it is ethically presumptive to state that Leviathan is so big that we can merely helplessly chronicle its existence. Perhaps Leviathan, like the sick sea whales which beached themselves in droves on the shores of southern California, is getting to be a pretty sick animal and hence a less compelling force.

John Lofland's book runs a similar and even longer course, but he introduces a new metaphor called an Actor who is juxtaposed with persons named Other. It is interesting that Matza's book continually quotes Goffman, with Howard Becker as the runner-up, plus some George H. Mead, whereas Lofland hews closer to the models of Mead and Talcott Parsons throughout his writing. This is possibly because Lofland is more interested in struggling with the concept of identity, as his title implies. Again, I have in my own writing felt it desirable to clarify three kinds of identification, namely, self-identification, sexual-identification, and social-identification. Problems of identification often occur on the three levels simultaneously, and whereas the social level is the one often most important and frequently ignored, the Lofland book does not systematically clear up this difficulty.

Socialization and Society. Edited by John A. Clausen. Boston: Little, Brown & Co., 1968. Pp. x+400. $5.50 (paper).

Political Socialization. By Richard E. Dawson and Kenneth Prewitt. Boston: Little, Brown & Co., 1969. Pp. x+226. $2.95 (paper).

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Socialization research is expanding so rapidly that its interpretation and classification are becoming as important as the exploration of new areas. *Socialization and Society*, edited by John Clausen, is a distillation in eight chapters of the work of five groups of psychologists and sociologists who met and prepared working papers during the period from 1960 to 1965, under the auspices of the Social Science Research Council. Their specific task was to propose theory, suggest needed research, and discuss applications arising from "the interrelation of social structure, socialization processes, and personality" (p. vii). *Political Socialization*, which is written by two political scientists, Richard Dawson and Kenneth Prewitt, is a review

of previous work within classification systems proposed by the authors. It considers only socialization into the political system, in contrast to the Clausen book which deals with all aspects of society.

The chapters in the Clausen collection vary in quality. A few authors have presented thorough but uninspiring reviews of previous work, failing to offer insights into the conceptualization or importance of socialization. The chapters also vary markedly in the explicitness of the relationship between socialization and social structure. There is little overlap between chapters, but the authors refer the reader to material in other chapters which is related to their point.

Clausen prepared two of the chapters and an introduction. "A Historical and Comparative View of Socialization Theory and Research" is fascinating, giving a background of the concept of socialization and the peculiarities of its usage within the major social science disciplines in the United States and in several European countries. Unfortunately, this chapter deals less adequately with the pressing need for a comprehensive theory of socialization. "Perspectives on Childhood Socialization" is well balanced, reviewing relevant material and raising appropriate issues for future research. Clausen's classification of modifiers of role relationships and his typology of early childhood socialization are particularly useful.

"Adult Socialization," by Orville Brim, is intended in some respects as a contrast to Clausen's chapter on childhood. Brim's outline indicates a potentially stimulating piece, but in fact his research review uses labor, marital, and mobility statistics to make a single basic point—that socialization does not stop with the attainment of adulthood.

In his chapter, "Society, Social Structure, and Child Socialization," Alex Inkeles, also a sociologist, relates socialization to the needs of society and to social structural factors (e.g., stratification, ecology). His presentation of parallel themes in the functional requisites of social systems and the socialization of individuals is an organized way of dealing with the system-relation problem, although the distinctive explanatory value of this formulation is not fully clear. His classification of the type of training which societies rely upon to produce socialized members is similar to that of Dawson and Prewitt. Inkeles's interest in the process by which socialization occurs is broader and shows more concern with the intention of socialization agents and the latent consequences of socialization practices.

The remainder of the book is by psychologists who have only a limited interest in social structure. Eleanor Maccoby gives an astute analysis of "The Development of Moral Values and Behavior in Childhood," contrasting the developmental point of view about process (associated with Piaget and Kohlberg) with the social learning point of view of Aronfreed. The chapter by M. Brewster Smith on "Competence and Socialization" reports research which includes animal studies and surveys of Peace Corps volunteers.

The final chapter, by Ronald Lippitt, entitled "Improving the Socialization Process," discusses socialization in the school. Lippitt raises provocative questions about the motivation of socialization agents and the lack of dialogue among teachers resulting from fear of ridicule by their colleagues. He suggests, inter alia, the resocialization of these agents.

The Dawson and Prewitt volume is narrower in purpose but as valuable as the Clausen book. The first chapters—"The Political Self" and "The Political Culture"—conceptualize political socialization in relation to the

concerns of the political scientist. The authors stress the relation between the broader social system and the nexus of socialization in greater detail than one finds in the Clausen collection. And a full chapter is devoted to usefully classifying and distinguishing between methods of political learning and various dimensions such as direct-indirect.

More important than conceptualization and taxonomy is the focus on the role of discontinuities in political socialization, since discontinuity has often been neglected as an explanatory concept because of the usual search for simple linear relationships. The Dawson and Prewitt chapter on the school as an agent of political socialization is a literate and informed discussion which brings previously unrelated data to bear on a topic where new direction is always needed. Here also is the only reference to Prewitt's fascinating data on African students. This section on the school contrasts with that on the family, where less imaginative research and fewer insights are to be found. In fact, both this book and the Clausen volume seem more insightful in dealing with the school as an agent of socialization than in dealing with the family. Both Clausen and Lippitt look at the diverse and largely uncharted type of socialization which the school as an institution provides. This change in emphasis is an interesting commentary on recent changes in behavioral scientists' faith in the ultimate importance of the family, and in their growing recognition of the complexity of socialization practices within the school. In summary, Dawson and Prewitt are successful in conceptualizing the field adequately, as well as distilling the explosion of research in political socialization during the last ten years.

Motivation and Organizational Climate. By George L. Litwin and Robert A Stringer, Jr. Boston: Division of Research, Harvard Business School, 1968. Pp. xii+214. $6.00.

Planned Organizational Change. By Garth N. Jones. New York: Frederick A. Praeger, Inc., 1969. Pp. xxiv+243. $6.50.

Analysis of Processes of Role Change. By S. N. Eisenstadt, D. Weintraub, and N. Toren. New York: Daniel Davy & Co., 1969. Pp. 43. $3.50.

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These three books are about the processes of change. That's about all they have in common. Their quality and style, their authors' orientation and training, their foci of convenience, their relationship to theory and practice differ enormously. This needs to be said early so that no unsuspecting reader be misled to think that these books have any commonality of approach. Also, the Eisenstadt et al. monograph is really an article bound in paper and should have been expanded into an important book instead of the cameo it now is; and Jones's book is really a distended article that should never have been published at all.

The less said about Jones's book, the better, but reviewer's etiquette requires, at the least, a quick summary. The author attempts to analyze about 200 cases of planned organizational change, culled from a variety of journals and books. From that base, he goes on to generalize about the

processes of planned change which involve six major elements: (1) the change agent, (2) client system, (3) goals, (4) strategies and tactics, (5) structuring of change, and (6) evaluation. These are interesting categories and certainly the topic of planned change, particularly these days is important enough. But, the book itself is pretentious and a total disappointment. After claiming that very little has been written or known about planned change, the author simply rehashes with painstaking obviousness the conventional wisdom. One fairly representative example of this can be seen in a short paragraph on page 109: "There appear to be client systems that are extremely difficult, if not impossible to help. This finding reaffirmed a tentative conclusion earlier made that the most critical dimension in change is the receptivity of the client system to change. If the receptivity is high, then successful change usually results. The opposite is the case if client receptivity is low."

More annoying than the banality is the *Reader's Digest* "ooh, the wonder of it; ooh the horror of it" which permeates the style. But, perhaps most troublesome is the frequent appropriation of other people's work without proper, or indeed, any attribution. The reader will find nothing new or different in this book that wasn't said far better ten years earlier in the Lippitt, Watson, and Westley volume, *The Dynamics of Planned Change.*

Litwin and Stringer were students of David McClelland, and they should make the master proud. Approaching organizational behavior through the motivational concepts of McClelland and Atkinson, they demonstrate how organizational "climate," defined in terms of intervening variables, can affect (arouse or reduce) motivational patterns and how these in turn are related to organizational performance. What particularly distinguishes their work is that they are among the first to take the Lewinian notion of situational variables, to define and operationalize them, and then to show their relationship to motivation (achievement, power, and affiliation), organizational goals, and leader behavior.

In their last two chapters, the authors relate their concept of climate to managerial practice and leadership. They suggest a variety of influence measures whereby the manager can manipulate the climate—for example, risk and risk taking, performance standards and expectations, warmth and support—to arouse or reduce motivation. Their model also suggests ways in which the manager can identify high achievers, affiliators, and power-centered individuals for certain types of tasks.

Motivation and Organizational Climate is excellent social psychology, a brilliant piece of work, based on an updating of the classic Lewin, Lippitt, and White leadership experiment (though a little corny and stereotyped) and three natural field settings for their findings. One can argue with a lot of it. For example, it appears to me that they greatly exaggerate the power of the leader to influence the organizational climate, overlooking in the process the objective environmental press—they treat only the "perceived characteristics" which are exclusively psychological—and the role of the peer group in establishing climate. Possibly theirs is a business school bias, and understandable at that, for they teach managers or potential managers. But, speaking as a practicing manager in a multiversity, I can say that I would never accept the responsibilities and omnicompetent role they assign to the leader.

There is also an interesting discussion of the ethics of manipulating which

I rather like for its honesty, though it occasionally substitutes *chutzpah* for analysis. I could go on about this book, the controversies it raises, and the neatness of its empirical model, but Eisenstadt et al. deserve almost equal time if not space.

Whereas Litwin and Stringer are concerned with organizational climate and the prospects of deliberately manipulating it, Eisenstadt and his colleagues focus on the concept of social role and the vulnerability of role to changes induced by extraorganizational pressures. The authors analyze eight roles in Israeli society, ranging from kibbutzniks to bus drivers, and show how "differential impingements" of social forces act as sources of change and how the social role may resist change.

The authors drive a deep analytic wedge into role theory with a seminal discussion of social roles, indicating, first of all, three "levels"—the technical, the normative, and the cognitive—and the forces which make each susceptible to change. They then go on to derive from this the degree to which each role setting is conducive to innovation: "Apparently the more the setting is (*a*) highly solidary, (*b*) relatively small-scale and homogeneous (nonbureaucratic), (*c*) autonomous in decisions, and (*d*) distant, but not dissociated, from the organizational or political centers, the more will it be conducive to the generation and acceptance of innovations" (p. 32).

As I said earlier, this is a small book which deserves to be a bigger one More examples, less densely presented and further elaborated, would turn a small masterpiece into a full-fledged one. It is about the best analysis I have read of the forces leading to role change.

The Artists of Terezin. By Gerald Green. New York: Hawthorne Books, 1969. Pp. ix+191. $10.00.

Robert N. Wilson

University of North Carolina

The late Sir Herbert Read, an eminent critic and historian of art, contended that "the artist is what the Germans call *ein Ruttler*, an upsetter of the established order." In this book, Gerald Green describes how a group of artists upset the established order of Terezin, a "model" concentration camp for Czechoslovakian Jews. The upsetters paid, almost to a man, the ultimate price for their artistic freedom: their lives.

Green, a novelist, has reconstructed the macabre history of one concentration camp, a camp that was distinguished from others in its category of hell holes by at least two peculiarities. First, Terezin was conceived by the Nazis, with a fine Teutonic illogicality, as a showplace among camps, a haven where elite Jews could play out the charade of a "normal" community. Second, and related to the facade of a *Paradeisghetto*, Terezin was the setting for a remarkably flourishing artistic life of concerts, plays, and study. The Nazi overlords did indeed hold the reins on this camp with atypical looseness, boasting of its unparalleled freedoms and amenities and using it as a false exemplar for Red Cross investigators to demonstrate how humane their solution to the Jewish question really was. But of course the uglier and truer story of Jewish fate was always just beneath the surface, bursting into the open whenever the camp administration felt provoked or in any way threatened. Overtly, Terezin was a place where artists and intellectuals could

continue to work, where some family units could remain fleetingly intact, where citizens could gather to applaud a performance of *The Bartered Bride.* Yet it was also marked by a frightful daily death toll from disease and hunger, by the periodic brutalities for which Gestapo and S.S. personnel had a special flair, and most ominously of all, by its status as a way station for transport to the ovens of Auschwitz.

What gives the artists of Terezin their unique interest is that quite a few of their drawings and writings survived the holocaust, and that the artists themselves provide a chilling case history of one of the artist's social roles in a totalitarian polity. Green has reproduced a generous sampling of drawings done at Terezin as well as several sketches and poems created by the children of the camp; his text is woven appropriately around the pictures, so that one can see what his words suggest. All of the products testify to the artist's toughness, his fidelity to his vocation in the most execrable of circumstances and with the bleakest of prospects. What happened to the artists is in this instance equally as important as the created yield. They died because they told the truth: alongside "innocent" work portraying simple daily life to which their German hosts could take no exception, they sketched the actual conditions of life at Terezin. This underground work came at length to the attention of their captors, who found it grimly at variance with the fiction of the model camp. So the artists had to go, first to routine torture and then to the death camps. Their comments on the system limned the system as it was, and this the Nazis found intolerable.

This book can be read in any of several ways. It has nothing explicitly to do with sociology narrowly construed, but as provocative material for analysis it is germane to such issues as bureaucratic pathology (the incredible German mismanagement of the camp), the posture of the artist in an extreme species of social order, and the nature of resistance and compliance in a terrorized population. For readers of a certain age, the history may even evoke a kind of perverse nostalgia; living vicariously for a few hours in Terezin, one finds his pulses only weakly responsive to some current nonnegotiable demands for autonomy and liberation. When it comes to doing your own thing, the artists of Terezin afford a notable illustration of how it can be done.

Colour and Citizenship: A Report on British Race Relations. By F. J. B. Rose et al. London: Oxford University Press, 1969. Pp. xxii+815. $12.50.

Alphonso Pinkney

University of Chicago and Hunter College

For a long time the British maintained a self-righteous attitude about race relations; they had prided themselves on their racial tolerance when compared with other people. Yet a small influx of West Indians had the effect of exposing their feelings about nonwhite peoples. In their nonwhite colonies around the world, British settlers had almost always set themselves apart from the native peoples, relegating these peoples to a subordinate, caste-like position. Violence was frequently employed to keep them oppressed. Within Britain itself, race riots against older nonwhite settlers had occurred as early as 1919; racism did not begin at Notting Hill and Nottingham in 1958.

But the riots in Notting Hill and Nottingham gave impetus to the first comprehensive study of race relations in Britain. *Colour and Citizenship* was planned by its authors to be the British equivalent of *An American Dilemma.* Armed with a generous grant from the Nuffield Foundation, officials of the Institute of Race Relations set out to find an equivalent to Gunnar Myrdal, that is, someone who was not British, to direct the study. Inasmuch as relations between the races constituted a relatively new social problem in Britain, they were advised that it was not necessary to select a non-British study director. They then offered the directorship to F. J. B. Rose, a British citizen who had recently returned to England after spending more than ten years as director of the International Press Institute in Zurich, Switzerland. In addition to a comprehensive assessment of the state of race relations in Britain, the institute's report contains a series of specific recommendations designed to improve the steadily deteriorating state of relations between the races. It is, then, the British equivalent of *An American Dilemma* and *Report of the National Advisory Commission on Civil Disorders,* both of which influenced its preparation.

The research on which the report is based was undertaken over a period of five years (1963–68). Along with conducting its own studies, the institute commissioned research from universities and commercial organizations. In addition to *Colour and Citizenship,* eight books and twelve major journal articles have already been published, and some twenty additional research reports, completely or partially supported by the grant to the institute, have been completed or are in progress.

Colour and Citizenship focuses on the three major nonwhite immigrant groups in Britain and the response of the native British to them. These groups are the Indians (Sikhs and Hindus), the Pakistani, and the West Indians (mainly Jamaicans). In 1968 these groups numbered slightly more than 1 million, and while a series of restrictive immigration laws precludes any massive influx of nonwhite immigrants into Britain in the near future, it is projected that by 1986 their population will be approximately 2 million. There are smaller numbers of several other ethnic groups in Great Britain, making it one of the most heterogeneous of modern nation-states.

The thirty-three chapters of this report are divided into nine parts, which may be combined into four main divisions: (1) an account of British society; (2) descriptions of the societies from which the immigrants come, the history of nonwhite immigration to Britain, and the adjustment of the immigrants to life in Britain; (3) the interaction of the native British and the immigrant communities, including a survey of native British attitudes toward immigrants; and (4) an assessment of the implications of the research findings and recommendations. In addition, there are fourteen appendixes and a bibliography of some 166 items.

In their attitudes and behavior toward nonwhite immigrants, the native British have demonstrated strongly entrenched feelings of racism. Segregation and discrimination are widespread, especially in employment and housing, and to a lesser extent, in education. The survey of attitudes indicates that the British are probably somewhat less prejudiced than Americans. For example, a 1968 survey rated nearly three-fourths (73 percent) of native British as either "tolerant" or "tolerant-inclined" (p. 593). At the same time, however, nearly two-thirds (65 percent) say that the British are

either "definitely superior" or "superior to some extent" to the people in Africa (p. 567).

While the British may verbalize relatively tolerant attitudes toward the nonwhites in their midst, the evidence indicates that their behavior is somewhat less than tolerant. The Political and Economic Planning Report, commissioned by the Race Relations Board and the National Committee for Commonwealth Immigrants, revealed that the extent of discrimination against nonwhite immigrants in employment and housing varied "from the massive to the substantial." Furthermore, it is reported that the discrimination is a result of racism rather than the immigrant status of the nonwhites. Those immigrants who are white (regardless of cultural differences) experience far less discrimination than those who are nonwhite (regardless of cultural similarities). Like white Americans, the native British maintain an elaborate hierarchy of social distance toward others, expressing greatest hostility toward those most different from them racially.

The massive nonwhite immigration to British started some twenty years ago, and the reaction to these immigrants was so strongly negative that laws restricting their entry were enacted. These laws are such that few nonwhites may now enter the country. In addition, there has been a proliferation of racist groups and organizations which openly express their antiminority hostility. These groups were sufficiently numerous and popular in 1964 that race and immigration became important issues in the general election. One candidate used the slogan, "If you want a nigger neighbor, vote labor," as part of his appeal to voters. In response to increasing racist propaganda and racial discrimination, the Race Relations Acts of 1965 and 1968 were passed into law. In many ways, then, relations between whites and nonwhites in Britain are similar to the situation in the United States.

Colour and Citizenship is an impressive report on the state of race relations in Britain. While it does not reflect the scope and intensity of scholarship contained in *An American Dilemma*, this is probably a function of the dearth of both scholars and previously published scholarly work in the area. It is candid in its appraisal of the injustices of British society. However, because of the state of the national economy, the authors felt compelled to temper many of their recommendations for action. While it is no doubt true that the status of nonwhite immigrants may be improved somewhat without the expenditure of immense amounts of money, it is likely that effective solutions to the problems they encounter will be costly. Because of a long history of economic exploitation of nonwhites, such expenditures are justified as a form of reparations.

The attitudes and behavior of native British citizens are the most important determinants of race relations in the country. Therefore, it is understandable that the main focus of the study would deal with the responses of members of the host society to the immigrants. Nevertheless, it is one of the shortcomings of the study that in the survey of attitudes, those of nonwhite immigrants were excluded. On the other hand, detailed information on other aspects of the various nonwhite communities is provided elsewhere.

The report goes a long way toward fulfilling its "very modest" aims: "To put into circulation information which might serve as a basis for policy making" (p. 755). One of the primary reasons for the explosive nature of the racial crisis in the United States at present is that the problem was ig-

nored for many generations. The British are in a position to profit from the American experience. If the many policy recommendations are seriously considered and implemented, it is still possible that the tide might be stemmed and that British society will develop along the lines advocated by the authors: one in which cultural diversity and mutual tolerance will serve to enrich the quality of the society.

The Population of Tropical Africa. Edited by J. C. Caldwell and C. Okonjo. London: Clowes & Sons, 1968. Pp. 457. $10.00.

The Demography of Tropical Africa. By William Brass, Ansley J. Coale, Paul Demeny, Don F. Heisel, Frank Lorimer, Anatole Romaniuk, and Etienne van de Walle. Princeton, N.J.: Princeton University Press, 1968. Pp. xxix+539. $15.00.

Apia E. Okorafor
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The Population of Tropical Africa is made up of most of the papers presented at the First African Population Conference, held in January 1966 at the University of Ibadan, Nigeria. The book is divided into two parts: (*a*) the demographic situation and (*b*) population growth and economic development. Each part begins with an introduction by J. C. Caldwell, in which he more than summarizes and gives needed focus to the papers in each section. The main features of the book can, however, be divided into three groups: (1) demographic analysis; (2) interrelationships among demographic, social, political, and economic factors; (3) policy considerations.

Among the papers concerned with demographic analysis (including those that merely evaluate the existing data) are those of E. van de Walle (chap. 1), W. I. Brass (chaps. 2 and 16), C. Okonjo (chap. 6), D. F. Heisel (chap. 14), C. Scott (chap. 15), Ansley J. Coale (chap. 17), R. Clairin (chap. 19), A. Romaniuk (chap. 20), J. Holzer (chap. 21), Dov Friedlander (chap. 22), and J. M. Boute (chap. 24). Only van de Walle, Brass, Heisel, and Coale deal with the entire tropical African region. However, they and their associates at Princeton University give a more detailed treatment of African demographic analysis in *The Demography of Tropical Africa.*

Several papers touch on the correlates among demographic, social, political, and economic variables. The paper by van de Walle underscores the problems posed by the dual nature of African economies and draws attention to the unsuitability of standard economic models for analyzing the subsistence sector of these areas. A number of papers (especially those on the Nigerian census) show that political factors, more than problems of personnel and money, may sometimes be critical in impeding the collection of reliable demographic data in some regions of tropical Africa. From the reports of many papers (too numerous to list here), a case can be made that, although the crude population densities of many parts of tropical Africa may be relatively low (by world standards), given the poor quality of most of their soils and their level of technology, these areas are already facing a population problem.

Population policy considerations range from KAP studies (T. Daramola, et al., chap. 41) to reviews of the various government policies on popu-

lation (Caldwell, chap. 37, and D. Kirk and D. Nortman, chap. 35). These show that, in general, the attitudes of individuals and governments in tropical Africa are favorable to the notion of family planning. (Current available evidence casts some doubt, however, as to the real attitude of individuals regarding family planning.)

Although a sizable number of the papers contained in this book are of poor quality, it is rather difficult to fault the book on these grounds when we realize that tropical African demography is still in its infancy. We cannot but encourage all those who show interest in this area. Moreover, Caldwell's two introductory chapters more than compensate for this defect and are sufficient for those who do not have to read any specific papers in the book.

The Demography of Tropical Africa is also divided into two parts. Part 1, which comprises the first five chapters, is devoted to the consideration, in broad terms, of fertility, mortality, and nuptiality in tropical Africa. The second part (chaps. 6 through 10) deals with the demographic case studies of selected areas within tropical Africa.

In the introductory chapter, Frank Lorimer reviews the development of sub-Saharan African demography from the work of R. R. Kuczynski to the time of his writing. He concludes that: "An encouraging aspect of the present situation is that, for the first time, sets of demographic data for some African countries are emerging above the threshold of completeness and specificity required for critical evaluation and analysis" (p. 7).

The case studies include, among others, the Republic of the Congo, Upper Volta, Dahomey, Guinea, North Cameroon, Angola, Mozambique, Portuguese Guinea, the Sudan, and Nigeria. The adequacy of the data used in these analyses varies from country to country, ranging from fairly high in the Congo to very low in Nigeria.

Some aspects of African nuptiality are considered by van de Walle in chapter 5. He finds that there is a great deal of variability in tropical Africa with respect to (*a*) marital systems, (*b*) intensity and incidence of polygyny, and (*c*) age at marriage. In chapter 2, he describes the different systems of data collection and the effects of these on the collected data, making suggestions for improving both the collection and the publication of demographic data in these areas. In the process, he emphasizes two striking features of African demographic data. First, African age distributions, despite different collection procedures, are characterized by a deficit of persons in their teens and a surplus in the center of the adult period. Second, "sex ratios at birth in tropical Africa may be markedly below those in countries with reliable statistics" (p. 38).

The three major methods of analysis and estimation employed in the book are described by William Brass and Ansley J. Coale in chapter 3. These are (1) the estimation of fertility from the combined analysis of data on births in the presurvey year and on children born to women of childbearing age; (2) the estimation of mortality in infancy and childhood from data on children born and surviving children; and (3) the estimation of fertility, mortality, and adjusted age distributions from a variety of data through the use of model life tables and stable populations. In each case, the authors took pains to show how errors either in the data or in the assumptions underlying the analysis would affect the results. Their estimates of the birth rate range from a low of twenty-seven births per thou-

sand population among the Muslims of northern Cameroon (1960) to a high of sixty-six births per thousand in the Ibadan Province of the western region of Nigeria (1952). Mortality estimates fall between forty-six deaths per thousand in the Benguela Province of Angola (1940 and 1950) and twelve deaths per thousand in the Rift Valley of Kenya (1962).

As the authors themselves say, the major contribution of this book lies in the development of various methods of estimating population parameters from incomplete or inadequate data. In this they have achieved a high degree of success. Their methods certainly permitted them to establish relative orders of magnitude with respect to the levels of fertility and mortality among the various regions of tropical Africa considered by them. However, it would have been very useful if estimates were also made of the sampling and the response errors of the respective sample surveys utilized by the authors. The knowledge of these would have provided correcting factors for the results that would have been obtained by standard demographic procedures, and could have constituted an alternative method of estimation. Another criticism is that the book fails, as has also been noted by D. I. Pool ("Perspectives on Tropical African Demography," *Africa* 39, no. 2 [April 1969]: 168, n. 3), to provide a bibliography, "particularly as many demographers will wish to go to the original papers cited in the footnotes" (ibid.).

Nevertheless, the two books under review constitute the most recent treatment in book form of tropical African demography, and should be a prerequisite not only for students of African demography, but also for all those interested in change and development in tropical Africa.

A Rumor of Angels—Modern Society and the Rediscovery of the Supernatural. By Peter L. Berger. New York: Doubleday & Co., 1969. Pp. ix+119. $4.50

The Religious and the Secular—Studies in Secularization. By David Martin. New York: Schocken Books, 1969. Pp. xi+161. $5.00.

Spiritualism and Society. By G. K. Nelson. New York: Schocken Books, 1969. Pp. ix+307. $7.50.

Susan Budd

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Studies in the sociology of religion tend to fall into one of two categories works of analysis, which discuss the nature of religion as a whole and its operation in society, and records of fact, in which material on a religious movement is presented in ways which interest sociologists. In the latter group, the existing typologies of religious groups are often measured against the new specimen and found, disappointingly often, not quite to fit. Major progress in the field has been due to binding analysis and fact tightly together, but they all too easily repel one another and slither apart. Professor Peter Berger's and Dr. David Martin's books fall into the category of works of analysis; the virtue of Dr. G. K. Nelson's account of spiritualism lies in its presentation of fact.

Berger and Martin are both challenging a view of religion which sees it as (*a*) behavior connected with churches and other formal institutions recog-

nized as religious by society and (*b*) rapidly disappearing in modern societies and consequently unimportant. At the same time, they are both critical of the type of analysis which identifies religion with an important function in society, and which then argues that no society can exist without a religion, consequently societies which lack conventional religious institutions or much support for them have political or scientific beliefs which are "really" religious. Both authors believe religion to be important to society and not replaceable by a scientific world view, and are consequently concerned at its diminishing role in modern societies. Neither author shares the view, common among religious sociologists, that religion can be most adequately studied from the "outside."

A Rumor of Angels repeats the analysis of religion to be found in Berger's *The Sacred Canopy* (New York, 1967), but the argument here is addressed to theologians. He is concerned less with a diagnosis of the current position of religion than with a remedy—"inductive faith"—which should restore to theology both intellectual vitality and a concern with the central problems of human existence. A theological retort has already appeared (*Transcendence* [New York, 1969]). This book is unlikely to interest sociologists unless they are also Christians, since the author's extremely important and interesting analysis of the operation of and prospects for religion in modern societies can be found treated at greater length in *The Sacred Canopy*.

Berger argues that modern society is characterized by a lack of interest in the supernatural or any reality other than a commonsensical and everyday one. Consequently, those still concerned with the supernatural experience strong social and psychological pressures, which they have tended to counter either by a sectarian withdrawal or by the involvement in the secular world of the modernist theologian. But the supernatural tradition in theology is threatened, not by science, but by the relativism of the sociology of knowledge, and the studies of the way churches actually operate. He argues for a new theology which would return to the natural human condition as a guide to the transcendent. This would repair our impoverished secularized consciousness and enable us to humanize our own age. Berger's account of the problem, if not of the remedy, is intuitively convincing, though it seems possible that the uncertainty and doubt about basic values he is describing is confined to liberal intellectuals. Security for most people may rest on material and familial grounds and may not be concerned with beliefs of any kind.

The Religious and the Secular consists of eleven essays, six of which have been printed elsewhere and two which originated as radio broadcasts. As the author disarmingly admits, the contents overlap each other somewhat. Despite this, the book deserves to be widely read for the many important criticisms of the current discussions of secularization, rationality, etc., in modern society. It is noteworthy for these criticisms rather than for the discussion of religion in Bulgaria, which necessarily was based on "largely impressionistic" (p. 137) evidence, or for the discussion of the secularization of music, which can only be a cursory treatment of the changing motivations, forms, technologies, and dominant ideas in the history of music in the West. Martin argues that the notion of "secularization" consists of many disparate elements not necessarily found together empirically. For example (p. 10), we oscillate between a definition of religion as churchly religiosity and an analytic distinction between a real and a bogus religion.

Thus it can be argued that both low rates (England) and high rates (U.S.A.) of church attendance are proofs of secularization. In a highly perceptive essay, "Secularization among the Sociologists," he traces the ramifications of the atheism of most sociologists of religion, which has led them to assume that religion is unreal or the province of the inadequate.

Spiritualism and Society is an account of the Spiritualist movement in Britain and America from its origins in the 1850s. The chief interest of the book lies in its discussion of the organization of Spiritualist groups. The author tries to account for their peculiarities by developing the typology of the cult, but both this section of the book and the general discussion of topics such as shamanism, magic, the truth of psychic phenomena, etc., do not seem very successful. By contrast, the discussion of who becomes a spiritualist, the continual tension between those who view it as a science and those who view it as a religion, and the division within the "religion" faction between Christians and liberals is extremely interesting; it suggests many parallels with other science-based religions and with what Smelser termed "general social movements." Further research on these areas, on the difference between England and America, and the recent shift of interest from psychic phenomena to philosophy would be valuable and might suggest a way to analyze the general field of the liberal, scientific, and moral movements of the last 100 years. At present, these labor under the typologies used for more orthodox religious movements, which obscure their significance as the likely form of "religions of the future." It is to be hoped that these "social facts" soon find an analyst.

The Semi-Professions and Their Organization: Teachers, Nurses, Social Workers. Edited by Amitai Etzioni. New York: Free Press, 1969. Pp. xviii+328. $10.95.

Russell Thornton

University of Pennsylvania

There is a place in the literature of sociology for this book, but it is because of the scarcity of comparative treatments of the semiprofessions and not because of any particular merits of the work itself. The emphasis rests on tenuous assumptions, and the form is a confusion of various types of sociological writing.

The central idea of *The Semi-Professions and Their Organization* (the last word of the title refers to place of employment, not to professional societies or associations and would be more accurate if it were plural) is to analyze these occupations from the perspective of the conflict resulting from the incompatibility of, as Amitai Etzioni terms them, "administrative authority" and "professional authority." The assumption of this perspective seems to be that the two authority forms are inherently incompatible. Little concern was evident from either Etzioni or the contributors for an alternate view. Further, and I think more importantly, the semiprofessional employee is depicted as wanting complete autonomy in his work activities. Such a view seems at the very least distorted when it is also stated, as it is, that semiprofessionals have personality characteristics conducive to supervisory control and, even, as several of the contributors argue, are not opposed to

supervision. Additionally, while it is frequently mentioned that semiprofessionals are typically supervised by their own kind, the implications of this and its contrast with the case of professionals are virtually ignored.

The form the book takes is equally open to criticism. Certainly the work is not a systematic comparative analysis of the various occupations comprising the semiprofessions. Nor is it a creative look at a well-researched area, helpful in producing new insights for others. It is not a rigorous summarization of research perspectives and research findings or a general introduction into a particular area of study. The book is a collection of six papers, four of which deal with a specific semiprofession (elementary school teaching, nursing, or, in two instances, social work), one with the implications of the predominance of women in such employment, and a final essay on the professionalization of occupations.

Dan Lortie focuses on the balance between autonomy and control, both hierarchical and collegial, of elementary school teachers. The analysis covers the school, the teaching profession, and the teacher. In contrast to this rather systematic analysis, Fred Katz's contribution examines how nurses restrict the flow of information within the hospital.

The treatment of social workers is divided between Richard Scott and Nina Toren. Scott relies on data from a social work agency that he has used before, but he extends the interpretation somewhat. His discussion of the conflict between the bureaucratic social work agency and the professionally oriented social workers seems now rather simplistic in light of more recent examinations of the organizational involvement of several other professional groups. Much of Toren's paper is devoted to an out-of-place and unnecessary examination of social work as a semiprofession, with the various and sundry definitions of a profession and a semiprofession presented. The remainder considers the bureaucratic involvement of social workers, the dual orientation of social work (i.e., the macroscopic orientation with efforts to influence broad social policy as opposed to the microscopic with efforts to help specific individuals in specific situations), and the interesting relationship between social workers and their supervisors.

Richard Simpson and Ida Harper Simpson show why a discussion of the conflict between membership in a semiprofession and employment in an organization must also consider the high percentage of women in these occupations. William Goode's essay on professionalization concludes the volume. The concern is with the development of professions, and the conclusion is offered that many of the semiprofessions will not become professions, at least as we generally define them. Of the three semiprofessions treated in the book, only social work, Goode contends, will likely do so.

To conclude, I suppose this book will be of interest to those concerned with the study of occupations as well as to those who are members of the three semiprofessions considered. Neither group, however, will likely learn much from it. It seems to be the type of book which every sociologist should have a copy of but not rely on too heavily.

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